

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

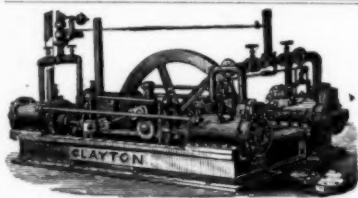
AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

WEEKLY.
\$3.00 PER YEAR.

BALTIMORE, MARCH 22, 1884.

NEW SERIES,
VOL. V. No. 6.

—MANUFACTURERS OF— **JAS. SMITH & CO.** —DEALERS IN—
CARD CLOTHING Of Every Description. Works, 413 to 421 Race St., Cor. of Crown. **Manufacturers' & Mill Supplies**
 COTTON and WOOLEN MACHINERY. Office & Store, 137 Market St., Philadelphia. Of Every Description.



Improved Duplex Air Compressor.

CLAYTON AIR COMPRESSORS

Rock Drills, Mining Pumps and General Mining Machinery,
For Catalogues, Estimates and Information, Address

CLAYTON STEAM PUMP WORKS, 45 & 47 York St., BROOKLYN, N. Y.

THOS. C. BASSHOR & CO. —MANUFACTURERS AND DEALERS IN—
 Boilers, Engines, Pumps, Wrought-Iron Pipe, For Steam, Gas or Water.
 Malleable and Cast Iron Steam Fittings,
 Gas and Steam Fitters' Tools, Brass Work, Steam and Water Gauges, Steam and Hot-Water Heating Apparatus, &c.
 —28 Light Street, BALTIMORE, MD.—
 SEND FOR ILLUSTRATED CATALOGUE.

ELEVATORS

STEPHEN A. MORSE.

C. M. WILLIAMS.

EDWIN F. MORSE.

CLEM & MORSE,

Manufacturers and Builders of HYDRAULIC, STEAM, BELT and HAND-POWER, PASSENGER and FREIGHT

ELEVATORS

With most approved Safety Devices. Dumb-Walters, Automatic Hatch-Doors, &c.

Sole owners of the right to apply the HEEBNER PATENT GOVERNOR to Elevators and Hoisting Machinery.

Send for Illustrated Circular.

411 and 413 CHERRY STREET, PHILADELPHIA, PA. Branch Office, 108 Liberty Street, NEW YORK.



ROCK DRILLS, Air Compressors,

Machinery for Tunneling, Grading, Mining, etc.

Two Complete Tunneling Plants Furnished Northern Pacific R. R. Co.

For Catalogues, Estimates, &c., address,

INGERSOLL ROCK DRILL CO., 10 Park Place, New York.

MORTON, REED & CO., Agents, Baltimore.



LOWELL CARD CO.

J. CLARK, President.

S. S. GOULD, Treasurer.

CARD CLOTHING

Of Every Description, LOWELL, MASS.

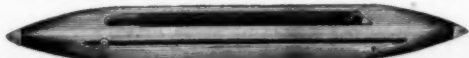
W. C. STEVENSON, Manufacturer of LOOM SHUTTLES and WEAVING REEDS,

For Cotton, Woolen, Silk, and Jute Mills. All Styles Patent Shuttles and Irons.

—LEICE REEDS AND ALL FINE REED WORK.—

Good Work. Low Prices. Quick Delivery.

PITTSFIELD, MASS.



TEXTILE MACHINERY.

THE BRIDESBURG MANUFACTURING CO.

MACHINE BUILDERS,

OFFICES, No. 201 CHESTNUT ST., PHILADELPHIA.

CARDING, SPINNING, WEAVING,

And all other Machinery used in Cotton and Woollen Factories.

—ALSO—

Builders of the Foss & Pevey Under-Flat and All-Iron Roller Cards.



POWER-SAVING RING SPINNING,

With Excelsior, Sawyer, Rabbeth, Birkinhead, or any of the approved Patented Spindles. The Excelsior Spindle drives the Bobbin positively and will run at any required velocity.

Self-Acting Mules for Wool,

All recent additions and improvements.

LOOMS

For Cotton, Jean, and Worsted Goods, and recently improved and superior *Drop-box Looms*, with patent full lift and full drop, skip-box motion and parallel pick, for Gingham and Dress Goods.

STOCKTON BATES, President. JOHN ROMMEL, Jr., Vice-President. JOHN ROMMEL, 3d, Secretary and Treasurer.

Estimates for Mills and Plans for same, with all details, furnished by the best Mill Engineers, at reasonable prices.

AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS,

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for Joseph A. Neene's Sons'

Roller, Slasher & Clearing Cloths.

—Agents for—

RODDICK'S PATENT IMPROVED OIL CANS.

Calf, Sheep and Lamb Roller Skins, and Roll Covers' Tools.



WE HAVE
Unequalled Facilities for Furnishing
Shuttles and Heddle Frames,
WIRE HEDDLES and WIRE GOODS
Of all Descriptions.

—Special Notice to Worsted and Silk Mills.—

We Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I.

—FACTORIES:—
PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

THE WHITIN MACHINE WORKS,

J. LASSELL, President and Treasurer.

G. E. TAFT, Agent.

H. ELLIS, Superintendent.

—MANUFACTURERS OF—

COTTON MACHINERY.

—OPENERS, LAPPERS, CARDS,—

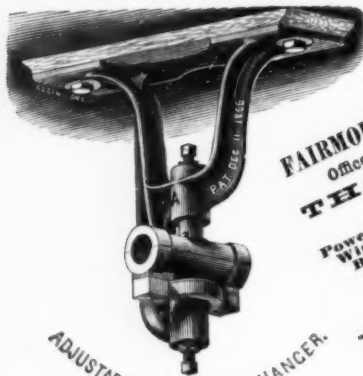
Railway Heads, Drawing,

RING SPINNING, SPOOLERS, WET and DRY TWISTERS,

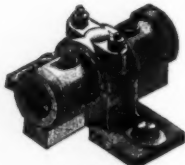
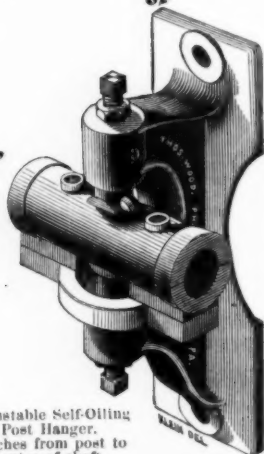
REELS,

WARPERS, DRESSERS, LOOMS, &c.

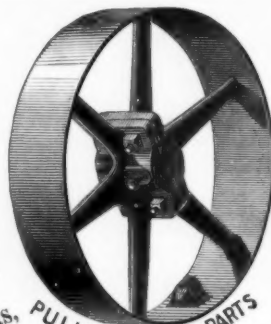
—Whitinsville, Worcester County, Mass.—



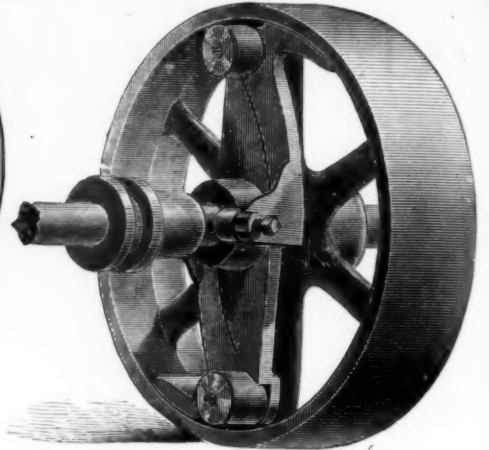
ADJUSTABLE SELF-OILING HANGER.

Ball and Socket
Self-Oiling Pillow Block.DOUBLE-BRACED ADJUSTABLE
SELF OILING HANGER.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.

FAIRMOUNT MACHINE WORKS.
Office, 2106 Wood St., Philadelphia.
THOMAS WOOD,
Manufacture as Specialties
Power Looms, Patent Bobbin or Quill
Winding Machines, Plain and Presser
Sewing Machines, Flats and Presser
er Spooling Machines, Reeling,
Warp Splicing, Dyeing and Cal-
endering Machines,
WARPING MILLS,
16, 18 and 20 yards Circumference,
WITH IMPROVED HEELS,
SHAFTING,
With Patent
ADJUSTABLE SELF-OILING HANGERS, PULLEY IN TWO PARTS
8, 10, 12, 15, 18, 20, 24 and 30 in. drop.
Also WALL, POST AND GIRDER HANGERS.
Pulleys from 4 inches to 10 ft. in diam. (r.
PATENT FRICTION PULLEY.
Pulleys in two parts, any size required.
PATENT HOISTING MACHINES.
Oil Presses for Lard, Fish and Paraffine.



PULLEY IN TWO PARTS

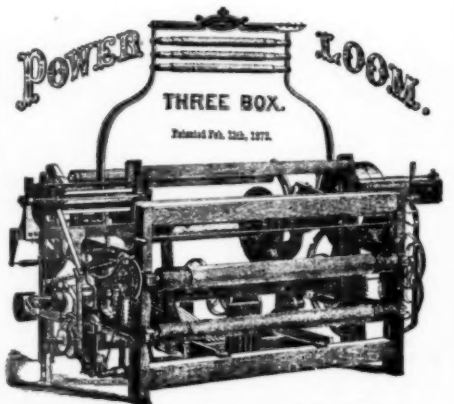
**PATENT FRICTION PULLEY.**

Simple, reliable and very durable.
Suitable for any kind of driving, they
serve equally well as driver or driven.

Special Driving,
such as Angular, Muley, and Gallows Driving,
furnished for any position
where possible to transmit power by belts.
PULLEYS from 4 inches to 10 feet in diameter.

Why use old style Bearings, that require oiling
every day, when you can get Bearings at less cost
that only require oiling once in Six Months, and
thus save oil and labor enough to pay for the bear-
ings in use. Test the matter for yourselves; a
trial always secures the trade.

ADDRESS,
THOS. WOOD,
Office, 2106 Wood St.
PHILADELPHIA, PENNA., U. S. A.



THE E. M. BIRDSALL COMPANY, AUBURN, N. Y.

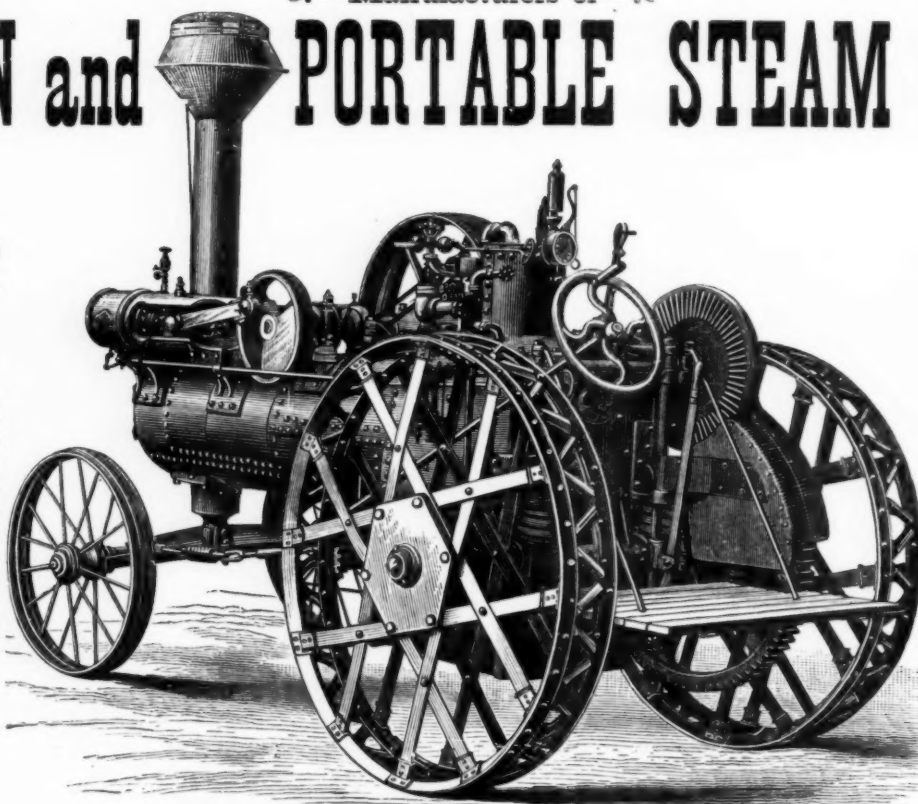
Manufacturers of

TRACTION and PORTABLE STEAM ENGINES.

—UNSURPASSED—

FOR
Power, Light Weight, Economy in
Fuel and Water, Efficiency, Sim-
plicity and Durability.

The Traction Engines are fur-
nished with Birdsall's Patent
Driving Wheel, which is made
expressly for soft or muddy
roads; they are warranted to
travel and take a load on roads
that are too soft to be used by
any other traction; are very sim-
ple; easily managed; better made
and made of better material and
decidedly the best finished engine
in the market. A prize will be
given to every farmer who tries
them and does not find by expe-
rience that they are not excelled
by any and superior to most.

**THE TRACTION ENGINE.**

—UNSURPASSED—

FOR
Power, Light Weight, Economy in
Fuel and Water, Efficiency, Sim-
plicity and Durability.

**APRON and VIBRATING
THRESHING MACHINES,**
embodying superior points of
excellence and merit peculiar to
themselves and possessed by none
others, are built expressly for
heavy work, and have unusually
large separating and cleaning ca-
pacity; are matchless in strength,
beauty of design and finish, and
can be operated by any one of or-
dinary intelligence, owing to their
extreme simplicity and solidity;
are capable of taking care of all
the grain that can be gotten to
them, and in a superior manner.

The Novelty Saw Mill is the only mill in the world built on truck wheels, and is gotten up on entirely different principles from any other. The cutting is done with the under side of the saw and with the grain of the wood instead of against the grain as in all other mills, thus saving largely in power required to drive the saw; they are gotten up expressly for light power, and are warranted to run with from $\frac{1}{4}$ to $\frac{1}{2}$ less power than any mill built; a ten-horse engine gives excellent power for them, and will handle the heaviest timber to the best advantage. They can be set up ready for operation while the steam is being raised on the engine; and they will pay the owner on small jobs, owing to their portability, that will not pay on any other mill. They make excellent lumber; are easily managed, and with our Ten-Horse Traction or Portable Engine will cut from 3,000 to 5,000 ft. of lumber per day, according to the size of the logs and skill of the operator.

WM. R. EMERSON, 6 & 8 N. Liberty St., Baltimore, Gen'l Agt.

for States of Pennsylvania, Maryland, Delaware, Virginia, West Virginia and North Carolina. Agents wanted in every county not already taken. Send for Circulars and Prices

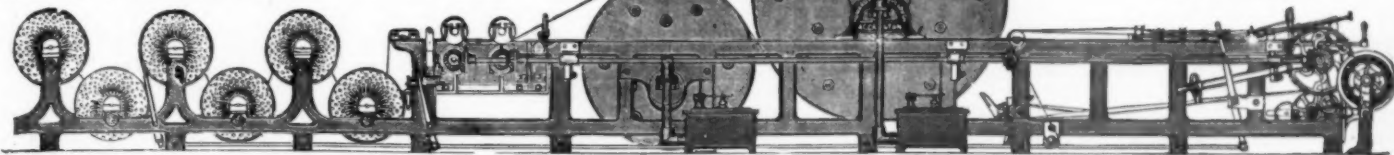
COTTON MACHINERY.

SLASHERS.

with Patent SLOW MOTION for "DOFFING" without stopping MACHINE, and REGULATING ROLLER, insuring perfect uniformity of SPEED and stress of yarn in passing through MACHINE. Over 800 at work in America alone.

WARPERS.

Over 6,000 in operation, with our Singleton's Patent Stop-Motion.



SPECIALTIES—Openers and Lappers, Cards, Drawing, Slubbing, Intermediate and Roving Frames, Patent Electric Stop-Motion, already applied to near 8,000 delivery heads of Drawing, and 50,000 Intermediate Spindles for preventing "Single;" Ring Spinning and Twisting Frames, the latest and best improvements; Self-acting Cotton and Woolen Mules; Patent Revolving and Traversing Yarn-Beam Pressers for Slashers; Card Clothing, in Leather, Rubber and Cotton; Spindles, Flyers and Fluted Rolls, Looms, etc., etc.

HOWARD, BULLOUGH & RILEY,

MILL ENGINEERS, ARCHITECTS.

Plans and Estimates on Request.

19 Pearl Street, BOSTON.

CORRESPONDENCE SOLICITED.

E. JENCKES MANUFACTURING CO., PAWTUCKET, R. I.

SOLE MANUFACTURERS OF

HICKS IMPROVED

U. S. Standard RING TRAVELERS,

Belt Hooks, Gimlet Pointed Wire Goods, Spinning Rings, Cotton Banding, Twine, etc. Spring Pins, Spring Cotters and Flat Spring Keys.

MANUFACTURERS' SUPPLIES,

LEATHER BELTING AND LACE LEATHER,

Roller, Slasher and Clearer Cloths.

Send for Illustrated Catalogue.



WHITINSVILLE SPINNING RING CO.

WHITINSVILLE, MASS., U. S. A.

SUPERIOR WORKMANSHIP.

NOT EXCELLED IN DURABILITY.

EVERY RING WARRANTED.



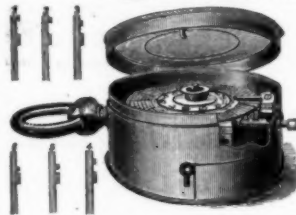
The Simplest and Best Method of Adjusting Rings.



SEND FOR SAMPLE AND PRICE-LIST.

BUERK'S WATCHMAN'S TIME DETECTOR.

—IMPORTANT FOR ALL LARGE CORPORATIONS AND MANUFACTURING CONCERNS.—



Capable of controlling with the utmost accuracy the motion of a watchman or patrolman as the same reaches different stations of his beat. The instrument is complete in itself, portable, and as reliable as the best lever watch. It requires no fixture or wires communicating from room to room, as is the case with ordinary watch clocks.

The Instrument will in all Cases be Warranted Perfect and Satisfactory.

P. O. Box 2470.

J. E. BUERK, Proprietor, No. 230 Washington St., BOSTON, MASS.

MOSHELEY'S CELEBRATED MOLLIS OIL.

It is a splendid lubricator for Stationary Engines, Printing Presses, Paper Mills, Saw Mills, Cotton and Woolen Mills, Spindles, &c. It is the cheapest and best Oil for Machinery, Harness, Belts, Boots and Leather generally. Warranted a Water-Proof Leather Preservative. It is penetrating, and renders soft and pliable the hardest leather.

Fire-Proof, Barn, Fence, Bridge and Roof Paint

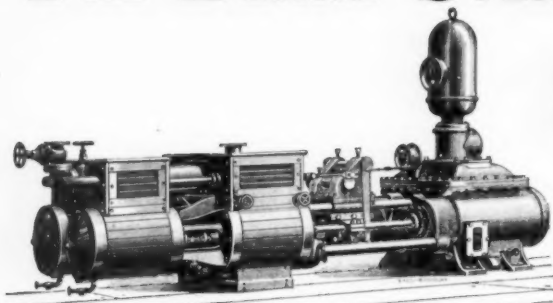
MIXED READY FOR USE.

Our Fire-Proof Barn, Fence, Roof and Bridge PAINT is unsurpassed for painting exposed surfaces, such as Tin, Iron or Wood Roofs, Wagons, Farm Implements, Fences, Barns, Cars, &c., &c. It is mixed ready for use, will not settle, will be found convenient, saving labor and time, and at the same time is handsome and durable. SOLD IN ALL-SIZED PACKAGES FROM 1 to 50 GALLONS.

Prices Mailed on Application.

HIRSHBERG, HOLLANDER & CO., 195, 197, 217 and 240 W. Pratt St., Baltimore.

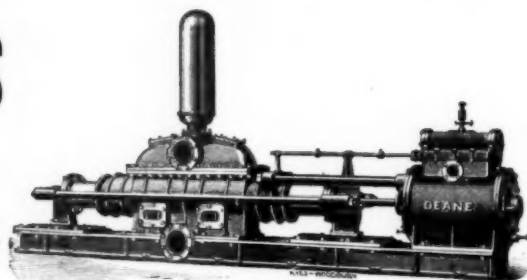
THE DEANE STEAM PUMP CO., HOLYOKE, MASS.



MANUFACTURE STEAM PUMPS

—FOR—
Every Service.

SEND FOR ILLUSTRATED CATALOGUE.



Water-Works Pumping Engines.

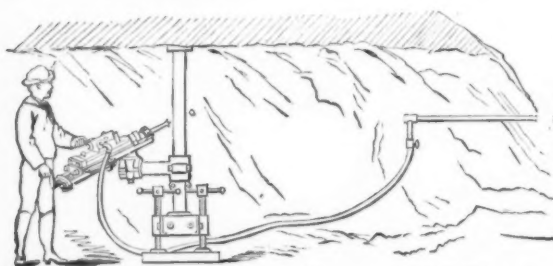
Single, Duplex, Compound, Condensing or Non-Condensing.
Estimates furnished on application.

WAREHOUSES:
NEW YORK—92 and 94 Liberty St.
BOSTON—54 Oliver St.
PHILADELPHIA—49 N. 7th St.
CHICAGO—226 and 228 Lake St.
ST. LOUIS—620 and 622 N. Main St.

Mining Pumps.

Our Patent Double-Plunger Sinking Pump has been adopted by the leading mines.

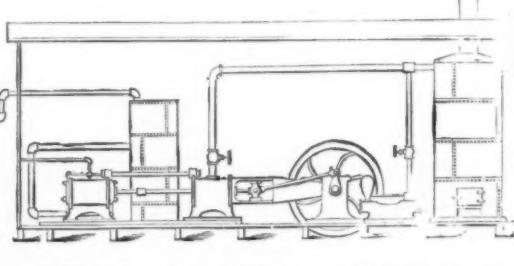
INDEPENDENT CONDENSING APPARATUS A SPECIALTY.



ROCK DRILL.

HOSE.

AIR PIPE.



AIR RECEIVER.

AIR COMPRESSOR.

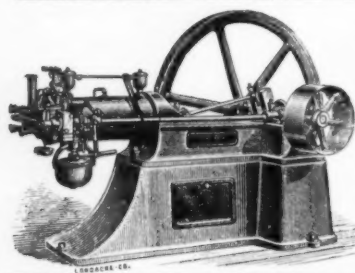
FEED PUMP.

BOILER.

RAND DRILL CO.

240 BROADWAY, NEW YORK.

Rock Drills,
Air Compressors, and
General Mining Machinery,
Blackrock Blasting Powder,
Blasting Batteries and Fuse.



Over 10,000 in Use.

OTTO GAS ENGINE.

Over 10,000 in Use.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all Expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Two, four and seven-horse power and upwards.

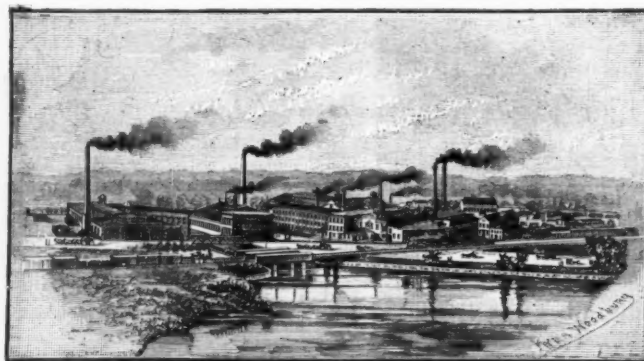
BUILT BY

Branch Office, 214 Randolph St., Chicago.

SCHLEICHER, SCHUMM & CO., Engineers & Machinists, N. E. Cor. 33d and Walnut Streets, Philadelphia.

Washburn & Moen Manufacturing Co., Worcester, Mass.

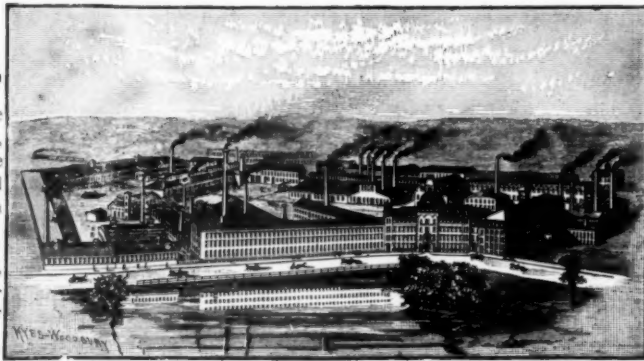
Wire Drawers, and Manufacturers of Iron and Steel Wire of Every Description.



Iron and Steel Telegraph
and Telephone Wire.

Patent Steel Wire Bale
Ties, Pump Chains,
Chain Wire, Steel Wire
for Springs, Needles and
Drills, Watch Main
Springs.

Send for Price-Lists,
Circulars and Descriptive
Pamphlets on Our
Specialties.



NEW YORK WAREHOUSE:

21 'Cliff Street,

New York City.

GLIDDEN PATENT

STEEL BARB WIRE.



The Best Fence Material in Use.

For Sale by Special Agents and Hardware

Proof against Fire, Wind and Flood.

Dealers in all Parts of the United States.

CHICAGO WAREHOUSE:

107 Lake Street,

Chicago, Illinois.

THE NEW PULSOMETER



The cheapest, strongest, most simple, compact, durable, effective and economical
STEAM PUMP IN THE MARKET,
for raising liquids under and up to 100 feet. No Machinery, No Oil, No
Special Care. Can be worked suspended by a chain. Will pass grit, mud,
sand, pulp, etc., without injury to its parts. Needs only a steam pipe
from boiler to run it. Price, 600 gallons per hour, \$50; 1,200 do.
\$75; 3,600 do. \$100; 6,000 do. \$150; 10,000 do. \$175; 18,000 do.
\$225; 25,000 do. \$275; 45,000 do. \$400; 60,000 do. \$500; 120,000
do. \$1,000. Compare this with any other Pump List.

Write for illustrated descriptive book with testimonials, &c. Mailed free.

PULSOMETER STEAM PUMP CO., 83 John St., New York City, U. S. A.



ESTABLISHED 1845.

The Oldest Saw Manufactory in the South.

TOLAND & SON, 85 N. Front St., Baltimore.

Particular attention paid to Large Circular Work. We warrant our
Small Circular Saws to stand more strain, without buckling or cracking,
than any other make. We make all kinds of Saws, — Ensilage, Feed, Meat
Choppers, and other knives made to pattern, warranted equal to the Best
Forged Knives, and CHEAPER.

N. B. We make no charge for hammering any Large Circular Saw that we can't make "go."

—GIVE US A TRIAL.

BALTIMORE Manufacturers' Record.

PUBLISHED EVERY SATURDAY.

Office, Maryland Building,
22 Second Street, BALTIMORE.

R. H. EDMONDS, Editor.
WM. H. EDMONDS, Associate Editor.

NEW ENGLAND BRANCH OFFICE:
Room 1, No. 19 Pearl Street, BOSTON, MASS.
JESSE W. BIGSBY, Resident Partner.

SOUTHERN OFFICE, ATLANTA, GA.
I. W. AVERY, Manager.

NEW YORK OFFICE, 100 Nassau Street,
JAMES L. ELY, Manager.

Price of Subscription Per Year in Advance:
(POSTAGE INCLUDED.)

TO UNITED STATES AND CANADA, \$3.00
OTHER COUNTRIES, - - - 3.54

ADVERTISING RATES:

One square (14 lines Agate, 1 inch) 1 time, \$ 1.50
" " " " " " 4 " " 5.00
" " " " " " 3 mos. 10.00
" " " " " " 6 " " 18.00
" " " " " " 1 year. 32.00
For advertising on outside pages add 50 per cent.
to the above rates.
Reading Notices 50 cents per line each insertion.

BALTIMORE, MARCH 22, 1884.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. We invite those interested in the development of the South to make free use of our columns. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more,—so if you desire to attract immigration or capital, or if you know of an opening for profitable investment in manufacturing, mining or kindred pursuits, write us an account of it. It will be published free of cost.

MESSRS. MOORE, MOORE & HANDLEY, hardware and machinery dealers, of Birmingham, Ala., who are, of course, subscribers to the MANUFACTURERS' RECORD, bought a lot of ground in that town one year ago for \$15,000. A few days ago they sold just one-fourth of it for \$15,000 cash, and refused \$31,000 for the other three-fourths—a pretty good advance in value. They propose to erect an immense building for their business.

THE *Southern World*, of Atlanta, a handsomely gotten up, first-class, sixteen-page, semi-monthly literary and agricultural paper, will issue a special edition of 30,000 copies on April 1st.

Our readers will confer a favor upon our advertisers and upon us, as well as benefit themselves, if, whenever they write to anyone advertising in this paper, if it is only for a catalogue, they mention that "your advertisement was seen in the BALTIMORE MANUFACTURERS' RECORD." A careful compliance with this request will be much appreciated.

The Right Way.

That the people of the South are determined not to wait for others to come among them and build up their country, but to push this work themselves, is one of the very gratifying features connected with the development of that section. The writer has often deeply regretted that in his native State, as well as in the other Southern States, there was too little disposition to improve the many natural advantages, and that the people were too prone to wait for others to come and help them. That this spirit is dying out is one of the best signs of the times. If the citizens of a town wish to see their place develop and build up, they must begin the work and push it forward vigorously. Outside help will then come in abundance. There are many thousands of Northern and Western people and many millions of dollars drifting to the South, but these people and this money will go where there are some signs of life and activity. Anniston, Birmingham, Atlanta, Roanoke, and other cities of almost equally as rapid growth, are attracting great attention because outsiders see that the citizens of those places have an abiding faith in their own city, and that they are not ashamed to let it be known. They believe that "he that bloweth not his own horn, the same shall not be blown," and consequently they are forever trying to let the world know of what wonderful advantages their city is possessed.

Modesty in setting forth business advantages is a commodity that will not pay for handling in these days; though a due regard for absolute truth and honesty in all matters, be they private or public business, is essential to permanent success. As illustrating these points let us look at Selma, Alabama. It is a city of great natural advantages, probably hardly surpassed in this respect by any city in the South. It has done a quiet, safe and conservative business, and its business men have prospered; but they didn't believe in telling the world of the attractions of their pleasant town, preferring to let the world do its own work in discovering these charms. The world, however, has been too much occupied in accepting and improving the advantages of other places that believed in telling what attractions they possessed.

The result is only what might have been expected: Selma stood still, while her neighbors pushed on rapidly ahead. A change has, however, taken place, and the business men of Selma have determined to put their own shoulders—and not somebody else's shoulders—to the wheel. They have begun well by forming an association, composed of their most active business men, to aid in developing their railroad facilities, in establishing new industries, and thus, by helping themselves, to let outsiders know that their faith in Selma's future is strong. We predict that these efforts will be

crowned with abundant success, and that ere long it will be our pleasure to tell of the rapid march of progress that Selma is making. And what the people of Selma have started to do can be done by almost every city and town of the South.

Building Operations in the South.

Among the many evidences of the increasing prosperity of the South, one of the best is the heavy building operations now in progress, and the unusually large contracts already made for buildings upon which work will be commenced as soon as the spring season opens. Never before in the history of the South has there been such remarkable activity in this line as will be seen with the return of good weather. The preliminary arrangements have been made and contracts given for an amount of work on public and private buildings that is truly surprising. In every section of the South new dwelling houses, many of them of a very costly character, new stores, warehouses, bank buildings, factories, mills and State and city buildings, are under contract.

Although the heavy rains have retarded work so greatly that only a comparatively small number of these houses are under way, yet even now in some sections the demand for carpenters is greater than the supply. Many of the Southern papers are reporting the scarcity of house-building mechanics, and the consequent inability of contractors to push their work as rapidly as desired. While great activity in building is to be expected in such rapidly growing towns as Atlanta, Anniston, Birmingham, Roanoke, and many others of the same kind, there is in proportion to population equally as much activity in hundreds of other towns and cities that are not so generally known as places of enterprise and rapid growth.

THE Dispatch, of Columbus, Miss., in commenting upon the signing of the railroad supervision bill by the governor of that State, says: "He has descended from the broad and liberal plane of the statesman to the narrow and grinding position of the demagogue. His views are not far-reaching enough to keep pace with the swelling tide of progress that is now sweeping over the State, and the people will demonstrate this fact to him if he ever comes before them again in the attitude of an applicant for a public position."

If the press generally of the South would be thus plain and emphatic in their opposition to the hampering and restrictive railroad legislation they would accomplish a vast amount of good for their country.

If the South wants railroads it must not seek to put railroad property under the control of men who know nothing about it and who have no pecuniary interest in it.

A Matter of Importance to Baltimore.

There are now several important railroad schemes before the people of this city that demand the most careful and impartial examination of our business men. That Baltimore is lagging behind, while her rivals are rapidly pushing forward, no one can deny. It is true that we may be doing in the aggregate as much business as we did some years ago; but while we are thus barely holding our own in that respect, other cities are reaping the benefit of the enlargement of trade, especially of the marvellous growth of Southern trade. We are therefore practically, even if not actually, going backwards. Unless the business men of this city are willing to see Baltimore drop entirely out of the struggle for commercial supremacy, they must take some decided action to turn the tide of affairs, so that Baltimore may once more take her proper position in the business world. We cannot afford, Micawber-like, to wait for something to turn up, and more especially we cannot afford to neglect the opportunities offered for developing our trade. It is to the South that Baltimore must look for her future trade far more than to any other section. The growth of that section within the last few years has been one of the wonders of the world, and yet we have only seen the beginning of the South's industrial development.

A through all-rail line from Baltimore to the South, with Baltimore as its terminus, is essential to the maintenance of our Southern trade, and for the past five years we have repeatedly urged the absolute importance of this. The Merchants and Manufacturers' Association claims that this can be accomplished by a loan of \$2,000,000 to the Richmond & Danville Railroad Company. If so, this would be a small price to pay for such facilities as this road would afford. Cincinnati spent ten times that amount for her Southern railroad, and the growth of her Southern trade has demonstrated that she acted wisely. If Baltimore can obtain the needed transportation facilities by an expenditure of \$2,000,000, whether it be by a loan to the Richmond & Danville, or by helping to build some other road, the future welfare of the city, it seems to us, demands that it be done.

THE publishers of the Boston *Commercial Bulletin* will greatly oblige us if they will remit the amount due for work done for that paper. It is true that we were not aware that we were in their employ, but then in their last issue they have a column of Southern industrial news headed "Reported expressly for the Boston Commercial Bulletin," and in that column we recognized quite a large amount of statistical information that we had carefully and laboriously prepared. As the editors of the *Commercial Bulletin* are, of course, entirely too honorable to appropriate that which does not belong to them, they doubtless intend to surprise us with a handsome check as payment for this work. An early remittance will be appreciated.

CONSTRUCTION DEPARTMENT.

We publish, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

REPORTED that J. W. Walker, Newbern, N. C., will remove his tobacco factory to Durham.

BEN. DE LEMOS, Haynesville, Ala., is preparing to manufacture machine bricks.

BRUSH Electric Light Association are still trying to work up a company in Selma, Ala.

THE Carroll Decorative Plate-Glass Co. has been incorporated in Baltimore by Samuel W. Register, Edward D. Onion, Charles W. Hatter, Wm. H. Porter, Chas. E. Ehmann and James Billingsley; capital stock is \$25,000.

W. C. MALONEY and G. G. Watson, of Key West, Fla., are interested in the new \$26,000 gas works to be established in that city. Company is buying ground for its works.

INCORPORATED—The Cedar Grove Pure Coal Co. of West Virginia, by J. W. Durbin, J. C. Durbin, Wm. Coles, John Temple, W. J. Turbin, John Turbin, Joseph Heisler, H. G. Durbin and S. C. Durbin,—all of Pennsylvania; main office at Lykens, Pa., and branch at Hampton, Kanawha county, W. Va.

BISHOP'S BAPTIST COLLEGE, Marshall, Texas, will build a \$12,000 addition.

It is reported that the new combination of coal and iron companies at Birmingham, Ala., mentioned in our last issue, will engage in steel-rail making.

AN organ factory is to be built at Winchester, Va., on ground purchased of J. Vance Bell.

REPORTED that the Empire Flour Mills, Columbus, Ga., will add \$45,000 worth of machinery.

D. W. ROGERS & Co., of Etowah, Ga., are moving their extensive saw and shingle mills to Renfro, Ala.

THE contract for building the Durham Cotton Mill has been awarded for \$22,000.

BENJ. F. HOLMES, of New Brunswick, N. J., expects to start canning factory in Savannah.

INCORPORATED—The Shelbyville Lumber and Furniture Co., Shelbyville, Tenn.

VICTORIA, TEXAS, has decided on extensive water-works.

J. D. McNEIL, Fayetteville, N. C., will add wool-carding machinery to his mill.

C. C. McCARTHY is building large tobacco factory at Asheville, N. C.

INCORPORATED in Virginia—the Alleghany Elevator Co.

AN explosion in the extensive coal mines at Pocahontas, Va., of the Southwest Virginia Improvement Co., destroyed large amount of machinery.

THE Macon Volunteers, Macon, Ga., will build an extensive armory.

SMITH, MITCHELL & Co., of Catlettsburg, Ky., are rebuilding their saw mill.

REPORTED that the Wilson Cotton Mills, Wilson, N. C., will enlarge shortly.

DENNIS & STERLING are building a furniture factory at Orlando, Fla.

A \$50,000 hotel is to be built at Winter Park, Fla.

THE City Bank, of Birmingham, will erect new building.

WARD & GILBERT, Richland, Texas, are putting up gin and mill.

NORTHERN capitalists will erect a factory in Houston, Ga.

CONTRACTS have been given out for erecting building for the Franklin Sorghum Sugar Factory, Franklin, Tenn., previously reported.

GEO. E. HUGHEY, proprietor Baker Mills, Mt. Vernon, N. C., is repairing them and adding new machinery.

ORGANIZED in Memphis, Tenn.—the United States Electric Light Company of Memphis.

It is reported that the United States General Construction Co., of New Jersey, will commence work on an extensive rail-line between Parkersburg, W. Va., and Clifton Forge, W. Va., and that the road will eventually be extended to Norfolk. Geo. M. Jewett is named as president.

INCORPORATED in West Virginia—the Vanderbilt Mining and Smelting Co., by S. G. Wright, Detroit, Mich.; W. Peters, Washington, D. C., and H. H. Blackburn, Martinsburg, W. Va.

THE \$2,000,000 bridge across the Ohio River at Henderson, Ky., on which some preliminary work has been in progress for some time, will be built by the Henderson Bridge Co., the necessary money having been raised.

INCORPORATED—the Marine Railway, Shipbuilding and Coal Co., of Alexandria, Va.

AMONG the stockholders of the \$125,000 Cotton Mill Company of Knoxville, previously reported, are W. R. Tuttle, B. R. Strong, M. McGhee, E. J. Sanford and S. Tuttle. Ground has been purchased and the building will be erected as soon as possible.

THE Brunswick & Western Railroad will at once commence to survey for a 51-mile branch.

THE Alabama & Georgia Railway, to build a road from Talladega, Ala., to Newnan, Ga., has been incorporated.

THE Shell Beach Railroad, of New Orleans, will build repair shop 200x50 feet.

A NEW electric light company is being organized in New Orleans.

A. H. BROWN, Fairburn, Ga., has just completed machine shop and wagon factory.

INCORPORATED in Virginia—the New River Steel and Iron Co.

HUGH MERNS has just started a broom factory at Mt. Sterling, Ky.

THE Seaton's Patent Wagon Co., capital \$30,000, has been organized in Tullahoma, Tenn.

BALDWIN COUNTY, Ga., will build a \$25,000 court-house.

THE Pensacola Grand Trunk Railway, to build a road from Chicago to Pensacola, has been organized.

HOUSTON & SMITH are putting up mill at Guess' Hill, De Kalb county, Ga.

MR. CHARLES M. NOBLE, of Anniston, Ala., will establish electric light works at that city.

A \$10,000 Presbyterian church will be built in Anniston, Ala.—Mr. W. H. Williams and others having it in charge.

L. N. DANTZLER, Moss Point, Miss., will erect large saw mill.

J. N. PRESTON & SON, of Austin, have prepared plans for a hotel, to be built by Col. — Driskill, to be 6 stories and 150x170 feet.

THE Tuscaloosa, Ala., Yarn and Rope Mill centemplate adding considerable cotton-spinning machinery.

THE sugar refinery project at Baton Rouge, La., previously mentioned, has been organized as the Standard Refining Co. of Baton Rouge; capital, \$110,000. Wm. Garig is president and Henry Newell vice-president. Will build at once.

THE Cripple Creek Iron and Manufacturing Co., the New River Zinc and Iron Co., and the Bowling Green Railroad and Lumber Co., all of Virginia, are to be incorporated.

J. O. HOLMES is erecting a grist mill near Forsyth, Ga.

A. B. ROBERTSON, of Danville, Ky., will establish large candy factory in Knoxville, Tenn., in a few months.

A \$100,000 cotton mill project is being worked up in Waco, Tex.

A GIN and grist mill is being erected at Richland, Tex.

COL. — STODDARD will build a new hotel at Bryan, Tex.

A RAILROAD is to be built from Tavares, Fla., to Lake Monroe. Alex. St. Clair Abrams can give information.

INCORPORATED in Virginia—the Stock Creek Coal and Iron Co.

THE Virginia Midland and the Chesapeake & Ohio Railroads have commenced work on a \$20,000 union depot at Charlottesville, Va.

MESSRS. BROWN & UNDERWOOD are building a sash and blind factory at Smithfield, Va.

THE Georgia Pacific Railroad will erect round-house and repair shops at Anniston, and the Anniston & Atlantic Railroad are expected to erect machine shops at same place soon.

WHARTON & McMILLAN, of Appleton, Wis., propose to erect large saw and planing mill at Brewton, Ala.

THE Georgia Pacific Railroad is to be extended from Birmingham 60 miles.

THE Holly Waterworks Co., of Denison, are about to begin operations.

ANOTHER new planing mill is to be put up at Kyle, Tex.; particulars later.

THE Tallahassee Falls Manf. Co., of Tallahassee, Ala., are increasing their supply of cotton machinery.

PRESIDENT HUNTINGTON, of the Galveston, Harrisburg & San Antonio Railroad, promises to build at once at Houston, Texas, machine shops to employ 1,000 men.

THE depot to be built in Austin, Texas, previously mentioned, it is reported will cost \$250,000.

LAREDO, Texas, expects to build water-works.

E. L. LEWIS & Co. will build saw and planing mill at Cynthiaana, Ky.

W. H. HUGHES, of the Louisville & Nashville Railroad, expects to start an axle-handle factory in Birmingham.

THE H. A. Ramsay Co., of Baltimore, previously mentioned, have commenced on their new works, which will be quite extensive. The works will be fitted up for iron ship-building, marine engineering, bridge work, &c. It is expected that several hundred hands will be employed.

PAULEY & BRO., of St. Louis, will build a \$12,000 jail in Asheville, N. C.

CHARLOTTESVILLE, VA., proposes to establish water-works.

HENRY & WHITE are erecting planing mill and sash factory at McKinney, Texas.

ORGANIZED—The Fort Smith & Saline Pass Air Line, to build a road from Fort Smith to Texarkana; capital stock, \$4,000,000. Directors are John Carnal, C. B. Neal, Wm. B. Turman, L. N. Byrne and C. H. Wheeler.

AN electric light company is being talked of in Raleigh, N. C.

RUMOR of a large paper mill at San Marcos, Texas, said to be an error.

W. C. WELLS has commenced building an \$18,000 court-house at Livingston, Tex.

A flour mill and gin are rumored in Baird, Texas.

UNION FLOURING MILLS, McKinney, Texas, will be changed into a large cotton-seed oil mill.

J. P. SMITH, H. G. Beaky and Gilbert T. Potter, of Fort Worth, Texas, expect to establish gas works at Corsicana, Texas.

INCORPORATED in West Virginia—The Warren Packard Co. Stockholders all live in Warren, Ohio; capital \$25,000; will handle lumber.

THE Louisville Gas Company, of Louisville, Ky., will increase its capital stock to \$3,000,000.

AN ice factory is being erected at Del Rio, Tex., and it is rumored that railroad machine shops will be built there.

BURNED.

FLOUR mill of Caleb E. Johnson, at Union, W. Va.

SAW and grist mill and cotton gin of E. M. C. Dowling, at Ozark, Ala.

GRIST mill and gin of David Holt at Chapel Hill, N. C.

MILL and gin of T. T. Elliott, near Shiloh, La.

The Victim of Free Trade Assumptions.

Instead of attempting to prove by figures its assumption that the people of this country pay the manufacturers \$600,000,000 when they pay \$150,000,000 into the Treasury the Herald imagines that it makes a point against protection when it says that while our agricultural exports were valued at \$619,260,449 in 1883, our exports of manufactured goods were only \$111,890 in 1883, against \$45,658,873 in 1860! What the Herald intended to say was that our exports of manufactures were valued at \$111,890,000 in 1883, which is quite a different statement. Nevertheless, the error ran through all the editions of the paper. If the Herald were desirous of giving its readers information on the tariff question, why did it not give the value of agricultural products in 1860, as it did those of manufacturing exports.

In round numbers the agricultural products exported from this country in 1860 was valued at \$256,000,000, while the value of the same in 1883 was \$619,000,000. During the same period, as above stated, the value of the manufactures exported increased from \$46,000,000 to \$111,000,000. To how much faster the export of agricultural products has increased than that of manufactures, we commend the following arithmetical proportion to the Herald: 256: 619:: 46: 111. That is, while the exports of the products of agriculture have increased in the ratio of 1 to 2.41 during the period named, the export of manufactures have increased in the ratio of 1 to 2.63.

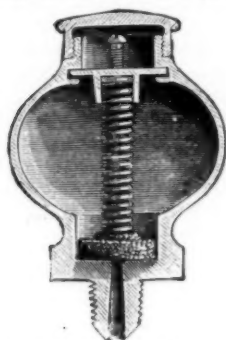
In the same time our home market for the products of the manufacturing, mining and mechanical industries has increased at least \$2,000,000,000, which is nearly twice as much as the exports of Great Britain into the "great market of the world," which she is so anxious we should take away from her, the total value of England's exports in 1882 being \$1,205,000,000.

In conclusion, we trust that the Herald will correct its figures relative to our exports of manufactures in 1883, and show its readers how it is that the people of this country pay the manufacturers \$600,000,000 when they pay \$150,000,000 into the treasury as tariff duties.—Boston Journal.

[Some time ago we pointed out the fact that the Bureau of Statistics had made a serious blunder in their figures, and that the value of the exports of manufactures in 1883 was over \$278,000,000, while the value of agricultural products was \$453,000,000. So manufactures make a much better showing even than they are credited with in the above.—Editor MANUFACTURERS' RECORD.]

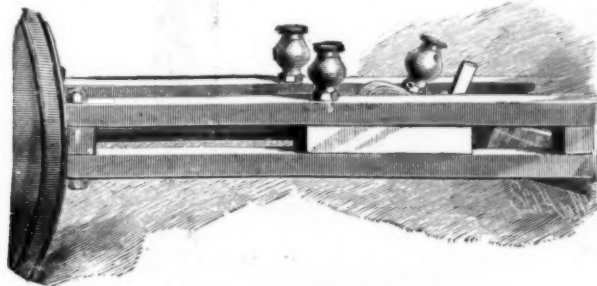
The Bryant Self-Feeding Oil Cup.

The interior of this cup shows a steel spiral spring, the upper end of which rests against a cap piece, having a socket and a set-screw to regulate the pressure of the same, while the lower end of it, fastened on a metallic disc attached to a thick circular piece of felt, rests upon the bottom of the cup and directly over the hole in the stem, through which the oil is supplied to the journal or bearing. The pressure of



THE BRYANT SELF-FEEDING OIL CUP.

the spring upon the disc prevents all escape of oil while the machinery is idle; but the slightest movement of the journal to which it is attached produces a vibration of the spring and a partial vacuum in the cup, by means of which the oil is forced and drawn through the felt, in proportion to the speed of the machinery. If oiling too freely, more pressure is put upon the spring by



VIEW OF CUP ATTACHED TO LOCOMOTIVE SLIDE

turning forward the set-screw above it; and if not enough oil is released, the pressure is reduced by turning the screw backward. Releasing all the pressure it will give 5 drops per minute. The speed of the machinery will regulate the supply of oil. No oil is wasted, and the outside of bearings, as well as the walls and floors, are kept clean and free from oil or grease.

The cup has been fully tested on different kinds of machinery, running from thirty revolutions to three thousand revolutions a minute, and it is claimed that in every case has given entire satisfaction.

It is said that a cup holding three ounces of oil has been run on a locomotive for fifteen hundred miles, and the same size cup, on the crank-pin of an 80-horse power rolling mill engine, for six weeks, with one filling, and in both cases giving perfect lubrication.

For further particulars address Cooke & Co., 22 Cortlandt street, New York city.

The *Lumberman and Manufacturer*, of Minneapolis, has been greatly improved in appearance by discarding the old blanket-sheet style and coming out in the same form as the *MANUFACTURERS' RECORD*.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron, and hardware dealers of the entire South, cannot find a better medium than the *BALTIMORE MANUFACTURERS' RECORD*. We are always prepared to furnish proof of our claims as to circulation.

A Fine Opening for Manufacturers.

BALTIMORE, MD., March 17, 1884.

Editor *Baltimore Manufacturers' Record*:

Noticing in your last issue the very kind permission to use your columns for any news affecting the manufacturing progress of the South, I embrace this opportunity to write you of a splendid water-power on the Catawba River, in Chester county, South Carolina. This truly wonderful and magnificent power has been surveyed by a very competent civil engineer, and found to have a fall of 48 81-100 feet, affording some of the finest factory sites of largest capacity in the United States. There is contiguous a canal 1½ miles in length, built over 60 years ago by the State, at a cost of over \$2,000,000,—that part of it available having cost, on an estimate of the Commissioner of Agriculture, about \$100,000. This canal has six locks of superb construction, built of cut stone and as perfect and complete as originally left by the builders. There are upon the entire canal at least 4,000 cubic yards of masonry, of the finest quality; every detail of construction shows intelligence and skill. There are at least four excellent sites within about a mile, that can be utilized, with a water power equal to that of Lowell, Mass.

The situation is singularly favorable for factory buildings of enormous capacity, as well as for an unlimited number of store-houses, houses for officers, tenants, &c.

Large quantities of finest granite lie exposed, most eligible for quarrying, in close proximity to all the mill sites; so that the

entire outfit for building, &c., can be obtained at hand.

The State donated the canal to Mrs. S. A. Boyston, of Winnsboro, S. C., through whose land it runs.

It should be noted that manufacturing property is exempt from taxation for 10 years, which is quite an item.

We see what a splendid opening there is for capitalists to take charge of and develop this wonderful power, where the combination of circumstances render investment a certainty of a large remuneration. This property, with over 600 acres of prime land, is for sale, and it only needs to be investigated to prove to any one its great possibilities. SOUTH CAROLINA.

[Further information can be obtained by the *MANUFACTURERS' RECORD* for any one desiring to invest.—*Ed. MANUFACTURERS' RECORD*]

ONE word, friend! Your national party has had before it but two great issues during the last 25 years—slavery and secession in 1860 and tariff in 1884. It failed and fought on the first and is now failing to fight on the second. In 1860 the question was whether slave labor should be protected. In 1884 the question is whether free labor shall be protected. The South foolishly lost its slave labor, (though the loss was right enough,) but it will hardly be guilty of murdering free labor now. To-day we have the opportunity of placing ourselves in harmony and alliance with a powerful North anxious to give us the hand of friendly help. The same unseen but monstrous power which has made the North opulent beyond conception now comes happily to our rescue in Virginia and Tennessee. The tariff is to-day the only hope we have. Shall we turn our backs on it and madly dash our brains out against both theory and experience?—*News*, Bristol, Tenn.

MANUFACTURING.

Subscribe to the *Baltimore Manufacturers' Record*. Price \$3 per year.

BALTIMORE.

MR. W. C. CODD, dealer in engineers' and machinists' supplies, desires to call attention to the new and second-hand machinery which he has for sale, having now ready for immediate delivery a number of engines and boilers, which will be sold very reasonably. He is the general Southern agent for the Lawson Noiseless Gas Engine, which is becoming so widely and favorably known. It requires no boiler, no steam, no fire, no special attendance, no engineer, and the insurance companies do not exact an extra insurance, it having been demonstrated to be perfectly safe. They are manufactured up to 6-horse power, and the prices for all are very satisfactory. It is well adapted for pumping water for private residences. He has on hand a second-hand gas engine of this make, which is guaranteed to be as good as new, and which will be sold cheap. He handles in large quantities the Medart Patent Wrought-Rim Pulleys, which are claimed to be the lightest, strongest and best-balanced pulley made.

MESSRS. E. J. CODD & Co., general machinists, 255 South Caroline street, have enough new and repair work on hand to keep their force well employed. They have just begun work on a steel boiler for a tug-boat.

MESSRS. F. C. NICODEMUS & Co., general machinists and manufacturers, No. 134 Thames street, report the prospect for business as very satisfactory. They have done considerable new and repair work, keeping a large force steadily employed. They have completed lately a 100 and a 75-horse power water-tube boiler for parties in the city, and have orders for one 125-horse power boiler, one 50-horse power engine, and one 60-horse power water-tube boiler, all for firms in the city. During the coming packing season they anticipate large orders for packing-house machinery of all kinds, of which they are heavy manufacturers. Their business in this line last year was very satisfactory, and the outlook now promises a much larger volume of trade for this year.

MESSRS. R. M. SPEDDEN & Co., South Broadway, have a large amount of new work and a still larger amount of steamship and other repairs on hand. Their business has been quite active for some time past.

MR. F. H. FOLSOM, millwright, No. 18 East Falls avenue, has considerable work on hand. He is about completing a large job for a mill in South Carolina, the machinery being made from new and original patterns.

IN GENERAL.

HOWARD, BULLOUGH & RILEY have just completed the execution of their slubbing and roving frames at the mill of the Fairmount Manufacturing Co., Williston, S. C.

P. M. BROWN has just completed a large four-story steam flour mill at Salisbury, N. C.

THE Green River Woolen Mills, of Rumsey, Ky., have been lately making additions and improvements; among other things, they have put in the Bridesburg "Clipper" loom. James Cate is connected with this enterprise.

MR. W. C. WHITE, of West Point, Ga., says that a foundry and machine shop is badly needed in that town.

WM. ARROTT & Co. have placed their order for two sets of wool cards to increase their capacity. They will put in Bridesburg cards.

THE Millburn Gin and Machine Co., of Memphis, will occupy their new works, on which nearly \$100,000 has been spent, about April 1.

JARVIS ELLIS, of Downingtown, Pa., has recently been engaged in altering his mill. He has put in new cards, mules and looms, all of which were made by the Bridesburg Manufacturing Co.

The Bridesburg Manufacturing Company of Philadelphia.

[From Philadelphia Times.]

Every line of business which, by seasons of continued prosperity, induces competition, finally becomes so close as to profits that other channels and outlets are necessary; hence, in the North, manufacturers of a low grade of cotton goods are driven to finer grades by the competition from the South. In the same manner woolen manufacturers who have been running on low-down stock will be compelled to run on higher classes. The "jersey," which had its advent in this country a short time ago and made a strong demand for worsted yarns, induced our American manufacturers to meet this demand at home, and for several months worsted yarns brought high prices. This helped to call attention to the important industry, which has just fairly begun, in this country. To meet the call for machinery, which is bound to come to our American shops, the Bridesburg Manufacturing Company, of this city, have been busily engaged in making patterns for some time past, and are now prepared to furnish any necessary machines for worsted work. The process of manufacturing differs from that for wool. The stock is of longer staple and requires less carding. It is taken direct from the wool-washing machine to the card by Bramwell or plain feed. In worsted carding the rollers are farther apart than in wool cards and the stock receives better treatment.

In the worsted cards made by this company, there are three iron feed rolls, 3½ inches in diameter, four licker-ins, made with wooden lags, 20 inches in diameter, four workers made in the same manner and each 14 inches in diameter, with one 14-inch worker on top of and between the first and second licker-in, one under and between the second and third licker-in, one on top and between the third and fourth licker-in, and one under and between the fourth licker-in and first main cylinder. There is a bur-guard or fan over the first 20-inch licker-in and also over the first 14-inch worker. The first main cylinder is made from wooden blocks or iron, as preferred by the manufacturer. It is 50½ inches in diameter and 60 inches wide.

There is one 15-inch fancy, and there are three 12-inch workers and three 5 7-16 inch strippers. The doffer, between the first and second main cylinders, is constructed in the same manner as the cylinders themselves. It is 40 inches in diameter and has over it a 5 7-16-inch dickey of iron. Between the middle doffer and the second main cylinder there is an angle stripper 5 7-16 inches in diameter. The second main cylinder is of the same dimensions as the first one, and has the same complement of workers and strippers together with the 15-inch fancy.

A balling head of entirely new design for this country takes the sliver from the second 40-inch doffer with its 5 7-16 inch dickey, and makes it into a ball or bobbin of from 15 to 18 inches diameter and 15 inches long. The main driving pulleys are 30 inches diameter and 6 inches face, while the pulleys driving from one main cylinder to the other are 30 inches diameter and 5½ inches face. The main cylinders run at a speed of 95 revolutions. The floor space required, inclusive of Bramwell feed, is 30 feet. The width is 8 feet 10 inches. The cylinder shafts run in case-hardened bearings. The small shafts have sleeves, and the poppet heads are from the newest designs. Fancy covers, of improved designs, go with the cards. The Glenmore Worsted Company have them running side by side with cards of English make, and give the Bridesburg cards the preference.

The Bridesburg Manufacturing Company have their works at Bridesburg, ten miles from Broad Street Station, on the New York Division of the Pennsylvania Railroad. They may justly boast of being the oldest manufactory of textile machinery in the country, having been established by Alfred Jenks in 1810. They have grown and expanded since then, until they now cover three and a half acres of ground and in busy times employ 800 men. The company are in every way fully equipped to supply all machinery necessary for the manufacture of cotton, woolen and worsted goods, and have a large and flourishing trade in this line of business. The officers are: President, Stockton Bates; vice-president, John Rommel, Jr.; secretary and treasurer, John Rommel, 3d. The general office is at 201 Chestnut street.

Electric Light Plants.

The accompanying illustration represents a plan of an electric light plant, as constructed and fitted up by the Jarvis Engineering Company, Boston, Mass. The first electric station ever built in this country, in New York city, was fitted up by this company, with boilers set with the Jarvis Patent Furnace. This was followed by stations in Albany, Boston and Baltimore. Believing that electric lights had come to stay, they determined to make this business a specialty, and from actual experiments soon found that to make these stations pay a profit many changes were required. Not only must the cheapest and lowest cost fuel be used, but the loss of power caused by using long lines of shafting must be overcome.

After carefully looking over the field they decided that the Armington & Sims engine was the one required for that purpose, and they gave the first order for a 9½ x12-inch engine of this make that was ever given to run dynamos direct with engine by belts, without the use of shafting. This engine ran one No. 7 and one No. 8 Brush dynamos, furnishing fifty-six arc lights in one circuit. They have the full agency for this engine in New England, and have now many plants in the Middle and Southern States.

the latter companies, those using long-stroke engines and high-cost fuel must either change their mode of running, or eventually succumb to the competition of the companies properly equipped, who can show a profit while their competitors are running at a loss.

The Jarvis Engineering Company can justly take pride in the success of the companies equipped by them, most of them being on a dividend-paying basis.

They have fitted up the following plants on this system: Brush Electric Light Co., Boston, Mass.; American Electric and Illuminating Co., Boston; Merchants' Electric Light Co., Boston; Narragansett Electric Light Co., Providence, R. I.; Woonsocket Electric Light Co., Woonsocket, R. I.; Middlesex Electric Light Co., Lowell, Mass.; Hartford Electric Light Co., Hartford, Ct.; New Haven Electric Light Co., New Haven, Ct.; Consolidated Electric Light Co., Portland, Me.; Lewiston Electric Light Co., Lewiston, Me.; New Bedford Electric Light Co., New Bedford, Mass.; Fall River Electric Light Co., Fall River, Mass.; Syracuse Electric Light Co., Syracuse, N. Y.; Bridgeport Electric Light Co., Bridgeport, Ct.; Brush-Swan Electric Light Co., Norfolk, Va.

The Spread of Protection Ideas.

The Lynchburg *Virginian* says: "But the question for the practical men of the South to consider is: Will we, now that we are for the first time in our history

List of Patents.

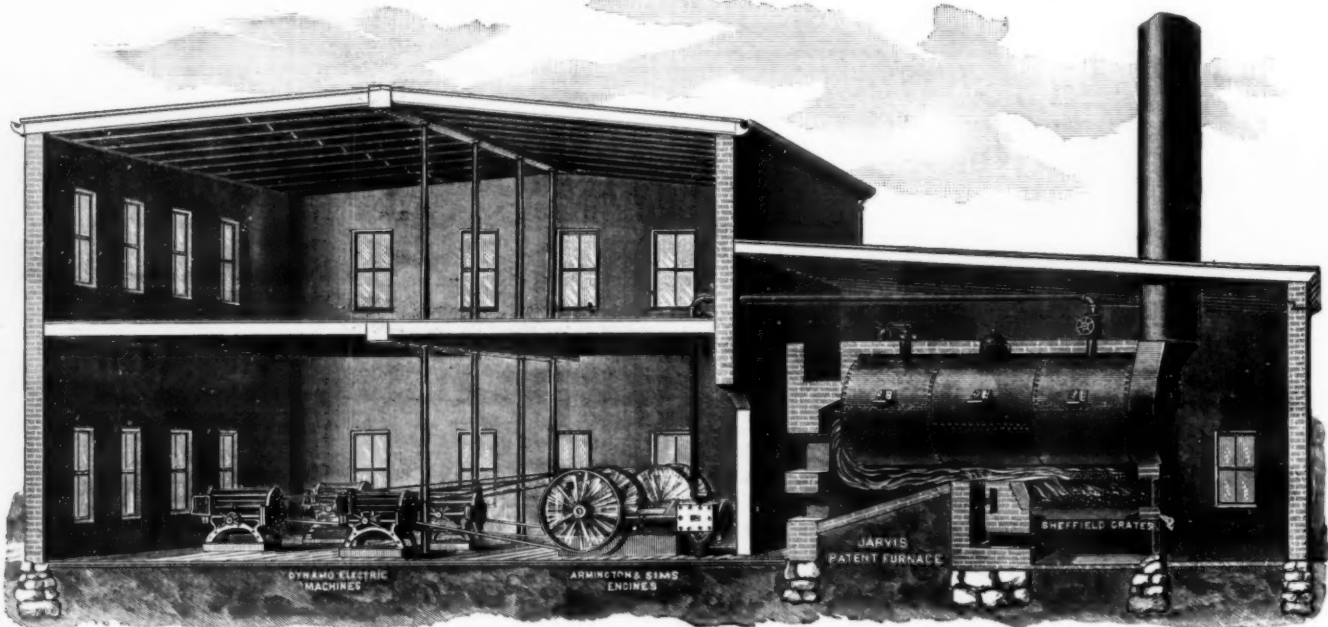
The following patents were granted to citizens of the Southern States, bearing date Mar. 11, 1884. Reported expressly for this paper by Louis Bagger & Co., mechanical experts and solicitors of patents, Washington, D. C.

- 294,954. Bagges, John, Baltimore, Md. Sofa-bedstead.
- 295,105. Brown, Mordecai, Huntington, W. Va. Lifting-jack.
- 294,850. Camp, David C., Athens, Ga. Mechanical motor.
- 291,972. Davis, Lelan A., Newark, Md. Door-check.
- 295,115. Detrick and Smith, Baltimore, Md. Combined saw filing and setting machine.
- 294,775. Elain, Wm E., Americus, Ga. Temporary binder.
- 294,986. Funderburk, D. A. C. and J. L., Bainbridge, Ga. Plow.
- 294,987. Gano, G. B., Easton, Md. Car-coupling.
- 294,873. Halsey, J. T., Richmond, Va. Valve-gear.
- 293,010. Howard, S. M., Wheeling, W. Va. Water-closet.
- 294,876. Huggins, Maulins, Waynesborough, Miss. Ointment for tetter.
- 295,026. Lockett, B. G., J. W. English and J. W. Murphy, Atlanta, Ga. Brick-drying kiln.
- 294,800. Madra, A. J., Fort Smith, Ark. Seed-planter.
- 295,032. Matthews, W. H., Livingston, Texas. Button.
- 295,127. Miller, W. M., New Cumberland, W. Va. Fire escape.
- 295,902. Mullave, Denis A., New Orleans, La. Cane-mill.

Alabama's Future.

No Southern State has such a future before her as Alabama. The eye of capital has already investigated her Northern sections, where stores of minerals in sufficient quantities to supply the world lie buried. There is but little need to tell men in fair words of our mineral wealth; that will surely be developed fast enough, now that a commencement has been made. In the valleys among these pregnant mountains are many acres of land fit for homes. Between the mountains and the pine lands of the South are our prairies. No more fertile lands are found on the face of the earth. They are equally as fertile and have many advantages over the Nile lands and the valley of the Mississippi. They are capable of supporting a dense population in comfort. The pine lands of South Alabama are capable of improvement by an economical and industrious population. For years Western States with unfavorable climates and with a soil only capable of producing a grain crop, have, by bureaus of immigration and judicious advertising, filled their vacant lands with a most desirable population.

Every year thousands of Scotch and German immigrants land at New York looking for cheap lands with a good climate. They could be brought to our State



ELECTRIC LIGHT PLANT.

The cost of fitting up a station on this system is from twenty to fifty per cent. less than the old way, with long-stroke engines and long lines of shafting, and the saving in power is from fifteen to twenty-five per cent. on the cost of running.

Selling electric lights is virtually selling power, and the cheap production of the steam power is the important feature of running an electric light business. The Jarvis Engineering Company have made special efforts to reduce this cost to a minimum. The boilers of their plants are set with the Jarvis Furnace, and the fuel used is usually a mixture of screenings and soft coal, costing about one-half that of good coal.

In close proximity to one of their stations, which pays less than \$3 per ton for its fuel, is one of a rival company using good coal at a cost of \$6 per ton; on a basis of seven hours run, using four pounds of coal per horse-power (the stations being about 100-horse power each.) the coal used would be, say, 2,800 pounds, and, at 300 nights run per year, would amount to consumption of 840,000 pounds; thus the difference in cost of fuel per year would be nearly \$1,300. This item of fuel alone is well worth the consideration of manufacturers as well as electric-light people, for, with

launching out into manufactures, and perceive our great advantage, abandon the policy that has enriched our Northern neighbors, and cry out for free trade? Or, rather, will they not say: Let us, who have so long, as an agricultural people, paid you of the North a tribute upon the manufactured articles we bought from you, derive some benefit from protection, until all of our plants shall be firmly established, and our manufacturing systems thoroughly organized and perfected under an experience of years, such as you have enjoyed. Having had protection so long, for the almost exclusive benefit of one section, let us adhere to it a little longer, for the benefit of the other, "in the infancy of her manufactures," as you of the North used to say.

There can be no question that a largely increased number of the Southern people begin to view the subject in this light, and under the promptings of self-interest, and with a view to building up and developing their section, have abandoned or greatly modified their views touching the question of free trade. And their representatives in Congress should take note of this if they would keep abreast of the times, and not be left behind in the advancing march of the South towards manufacturing and commercial greatness."

- 295,128. Mulvihill, M. J., Warren county, and J. D. Tinney, Vicksburg Miss. Earth excavator and embankment builder.
- 295,129. Nolen, S. A., Searcy, Ark. Saddle stirrup.
- 294,907. Perry, John T., La Grange, Ga. Portable counter.
- 294,810. Roberts, E. J., Ashland, Ky. Car coupling.
- 294,818. Speers, Noah W., Sr., Memphis, Tenn. Baling press.
- 294,819. Speers, Noah W., Sr., Memphis, Tenn. Combined friction and cog gear.
- 294,929. Stubbs, E. W., Lincolnton, N. C. Turbine water-wheel.
- 295,087. Welsh, Alex., St. Denis, Md. Holder for the carbons of incandescing electric lamps.
- 295,088. Welsh, Alex., St. Denis, Md. Electric lamp.
- 295,890. White, J. H., North East, Md. Razor strop.
- 294,896. Yale, R. H., New Orleans, La. Baggage drier.

WHEN you go to Cincinnati stop at the Palace Hotel. You will find comfortable, well-furnished rooms, good meals, polite and accommodating attendants,—everything, in fact, calculated to promote your comfort and make your stay pleasant. It is a new hotel, and everything about it is new, fresh and attractive. The charges are as low as those of any other first-class hotel.

Subscribe to the *Baltimore Manufacturers' Record*. Price, \$3 per year.

easily if the proper measures were taken.

Our next legislature could do no more economical and wise legislating than upon this subject. A bureau of immigration, with a commissioner who is awake to our needs, and with business skill and ability, who can realize that the world is older than it was twenty-five years ago, would, in a few years, fill our State with an industrious, tax-paying population. There would be no wisdom or economy in creating an office and filling it with some old political barnacle who has done good party service. Create the office, fix a decent salary, and get some good business man who does not want it to take the position. We need forty counties like Cullman, and we can have them. We need an honest, provident, peace-loving, law-abiding, agricultural population, and we can have it if the proper steps are taken at once. We would be glad to hear from others on this important question—Chronicle, Birmingham, Ala.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the *BALTIMORE MANUFACTURERS' RECORD*. We are always prepared to furnish proof of our claims as to circulation.

The Sombart Patent Gas Engine.

These engines are intended exclusively for small power to 1-horse power to be used in small shops and domestic industry. They are as simply constructed as possible and work in the following manner:

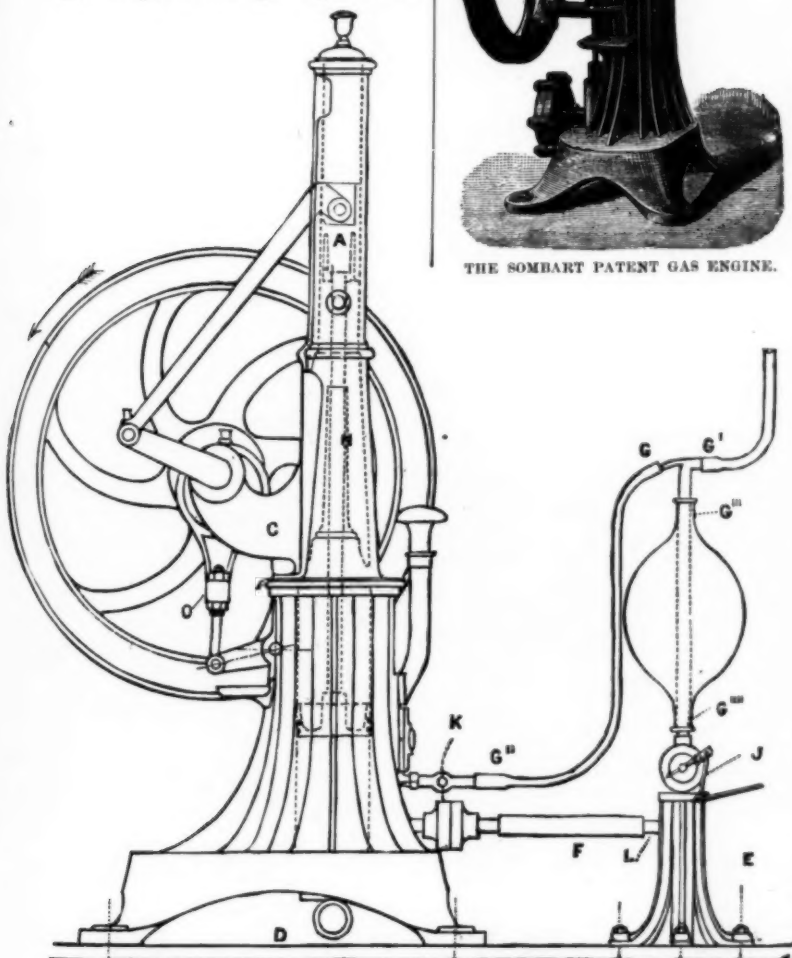
In the working cylinder a piston ascends and descends, the metallic packing of which is made to fit the cylinder tightly. The piston requires no lubrication and is coupled to the crank by means of the piston rod, slide-block and connecting rod. The engine being single acting, is provided with a balanced piston-valve which feeds and discharges the cylinder from its side only. The cylinder is supplied with inflammable gas, such as coal gas, oil or water gas, or any fixed illuminating gas, by means of an India rubber tube or any other suitable pipe, and valve, and with atmospheric air by a larger valve.

The mixture of gas and air is sucked into the cylinder through the piston valve

explosive mixture in the cylinder is secured. The piston valve, which, in lieu of working in the bore of a body cast in one piece with the cylinder as before, now slides in an isolated piece embracing the gas-valve, air-valve, piston-valve cylinder, and the ajutage of the exhaust pipe; and can be solidly connected with and easily taken off the cylinder by means of screw



THE SOMBART PATENT GAS ENGINE.



THIS ILLUSTRATION SHOWS MANNER OF SETTING UP OF NOS. 3 AND 4.

when the piston begins to rise, until the bottom of the latter has passed the opening of the ignition valve, whereupon the igniter inflames the explosive mixture contained in the lower portion of the cylinder. The ascending stroke of the piston is completed by virtue of the expansion of the mixture of gas and air caused by the explosion. When the piston descends, the burnt gases are forced out of the cylinder through the exhaust pipe.

The cooling of the cylinder is not effected by water, but by the peculiar form of the exterior of the cylinder, which is provided with a number of radiating ribs for the purpose of increasing the surface of radiation. The piston-valve placed at the side of the cylinder is balanced and disposed in such a manner as to dispense with lubrication.

The most striking points to be mentioned in the recent various improvements of this patent gas engine are: the igniter, by which not only the heating of the engine before starting is dispensed with, but a more correct and reliable ignition of the

studs. The result of this being, that any reparation of these parts involves no displacement of the whole engine, but of this part only.

The air and gas-valves are now provided with perforated sheet-iron discs, offering a greater resistance to the burning of the India rubber rings contained therein. By a peculiar arrangement of the air-valves, these engines run almost silent, so that they can be placed on any floor. The eccentric is now removed to the end of the crank shaft bearing quite near the fly-wheel, and is driven by a steel pin, occupying a hole of the latter, and thus preventing its altering its position in relation to the fly-wheel. By virtue of this change the bearing of the crank shaft, which is fitted with a phospho-bronze bush, becomes larger and more continuous. To prevent the cylinder from being heated by the igniter flame, a small chimney is placed just above it, through which the flame escapes without coming in contact with the cylinder wall. Although repairs are but rarely wanted, still the whole of the engine

is made so as to enable anyone to remove without difficulty each separate part from its place, and to replace it by a new one which can be procured from us. This is of great importance for those places where competent workmen cannot be found.

These engines are manufactured by the Sombart Gas Engine Co., Hartford, Conn., Messrs. Jackson & Tyler being their Baltimore agents.

NEW PUBLICATIONS.

THE LIFE, LETTERS AND LITERARY REMAINS OF EDWARD BULWER, LORD LYTON. New York: Harper & Bros. Vol. 1. Price \$1.75.

Among the papers of the late Lord Lyton was found, after his death, an unfinished autobiography, with a letter, in which was expressed the wish that his son should complete and prepare it for publication. This, his son, Robert Bulwer Lyton, has undertaken to do, and out of a mass of material has produced a work of rare value and interest. Besides being a faithful history of the noted author's life, the book contains many private letters and documents serving to throw light upon events and circumstances in his career hitherto misunderstood; and also numerous unpublished manuscripts of sketches, poems, plays, etc., with portraits of several members of his family. It is a work that will be eagerly read by those to whom Bulwer's writings have been sources of much pleasure.

SHORT STUDIES OF AMERICAN AUTHORS, by T. W. Higginson. Boston: Lee & Shepard. Price 50 cts.

An exceedingly interesting volume of brief criticisms of American writers. The author shows a high appreciation of the writings of Hawthorne, Poe, Thoreau, Howells, Helen Jackson and Henry James, Jr., and renders graceful tributes to their genius. The author himself is a critic, historian and essayist of ability.

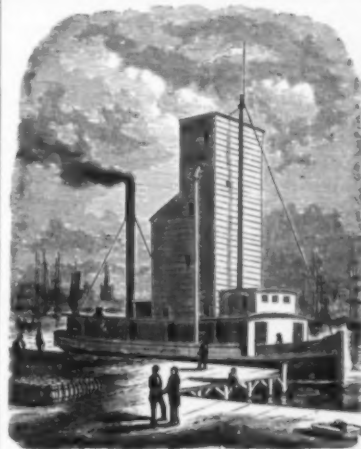
HANDBOOK OF CONVERSATION. Boston: Lee & Shepard. Price 50 cts.

In this little volume will be found much useful information, and there are few persons who could not profit by reading it. It comprises an address by Dr. Andrew P. Peabody to young ladies; a lecture by Francis French; hints on the current improprieties of expression in reading and writing, and mistakes and improprieties of speaking and writing corrected.

LITTELL'S LIVING AGE for March 1st and 8th contain The English Church in the Eighteenth Century, *Quarterly*; The Uncertainties of Science, *London Quarterly*; Fray Gerundio—a Clerical Don Quixote, *Church Quarterly*; A Walk to Coomassie, *Nineteenth Century*; Sir Theodore Martin's Life of Lord Lyndhurst, *Blackwood*; The Character of Dogs, *English Illustrated Magazine*; The Pottery Districts of Fiji, *Leisure Hour*; The True Story of Adam Bede, *Sunday Magazine*; "Chinese Gordon," and Recreations of Men of Letters, *All the Year Round*; Christianity and Politics, *Spectator*; The Defense of Canton, *China Mail*; with instalments of "A Wizard's Son," "The Baby's Grandmother," and "Valerie's Fate," and the usual amount of poetry. Littell & Co., Boston, publishers.

THE Manhattan for April contains: Edwin Booth, frontispiece; Edwin Booth, by Henry C. Pedder; Sounds of a Spring Evening, a poem; An Autographical Romance, a story; Literature and Science; Kismet, a poem; Rothenburg in Bavaria; An Easter Egg, a story; El Mahdi to the Tribes of the Soudan, a poem; Recent Tendencies in American Journalism; Love's Creed, a poem; One View of the Chaucerian Mania; Jasper Francis Cropsey, N. A.; Ego, a poem; Tinkling Cymbals, Recent Literature, Town Talk, Salmagundi.

THE ART FOLIO for March contains the usual interesting variety of illustrations, accompanied by stories, sketches, poems, &c. The Art Folio is a valuable monthly art magazine published at \$3 a year by J. A. & R. A. Reid, Providence, R. I.



F. H. FOLSOM,
Millwright and Mechanical Engineer,

18 East Falls Ave., BALTIMORE, MD.

All work executed and Drawings furnished at shortest notice for Floating and Stationary Elevators, Flour Mills, Malt Houses, Breweries, Saw Mills, Fertilizer Factories, Sumac Mills, Paper Mills, and all other kinds of Machinery.—Orders by mail promptly attended to at lowest prices.



Agent for Seldner's Improved Belt Fastener.

—Send for Circular and Sample.—

Derby Roll Top Desks.

—Best Office Desk in the World.—



Cherry, Walnut, Oak, Ash and Mahogany.

—Send for Illustrated Catalogue.

Geo. H. Derby & Co.
55 Charlestown St., Boston, Mass.

E. J. CODD & CO.

Foundry, Machine and Boiler Works,

255 to 261 S. Caroline St., BALTIMORE.

—BUILDERS OF—

Stationary and Marine Boilers, Stills, Tanks, Agitators, Kettles, &c.; Stationary and Marine Engines, Fertilizing Mills, Steam Dredges, &c. Prompt attention given to Steamship, Mill and other Repairs. Iron and Brass Castings made to order.

—ESTABLISHED 1865.—

Steam Boilers

JOHN T. COLEMAN & SONS,

Steam Boiler Works,

Cor. Holliday and Pleasant Sts., Baltimore.

Manufacturers of all kinds of Steam and Bath Boilers, Smoke Stacks, Water Tanks, Lard Kettles, &c. Particular attention given to repairs.

WIRE RAILING

and Ornamental Wire Works.

DUPUR & CO., 36 N. Howard St., Baltimore.

Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Bedsteads, Chairs, Settees, &c.

OFFICE MANUFACTURERS' RECORD, }
BALTIMORE, March 19, 1884. }

Philadelphia Iron Market.

Manufactured iron is dull and weak, the expected demand is still withheld, and mills are working along on the small orders that are presented from week to week, and which are taken at 1.90 to 2 cts. for refined and 1.70 to 1.85 for common. There are no large offers, and even inquiry is dull. A number of large orders for cars will probably be given out within the next 10 days, and the mills on common iron are looking forward to a good deal of work from this source. There is nothing new to report as to steel rails. Small orders continue to be presented, and are taken at \$34.50@35. Large orders would be taken in Eastern

HARDWARE.

MR. ARTHUR EMORY, hardware commission merchant, of this city, has added to his line of goods a full stock of Oliver Ames & Son's shovels, which he will sell at manufacturers' prices.

Cincinnati Iron Market Report.

| HOT-BLAST FOUNDRY. | | | | | |
|---|------|----|----|----|----|
| Hanging Rock C. C., No. 1..... | \$21 | 50 | @ | 23 | 00 |
| " " " " " " " " " " " " | " | 19 | 50 | @ | 22 |
| Southern " " " " " " " " " " " " | 30 | 00 | @ | 22 | 00 |
| Strong Coke, " " " " " " " " " " " " | 18 | 50 | @ | 19 | 50 |
| " " " " " " " " " " " " | 17 | 50 | @ | 18 | 50 |
| " " " " " " " " " " " " | 17 | 00 | @ | 18 | 00 |
| Soft Stone Coal, " " " " " " " " " " " " | 19 | 00 | @ | 19 | 50 |
| " " " " " " " " " " " " | 17 | 50 | @ | 18 | 50 |

| | | |
|---------------------------------|----|----------|
| FORGE. | | |
| Strong Neutral, No. 1 Mill..... | 16 | 50@17 00 |
| Cold Short. " 1 "..... | 15 | 50@16 00 |
| CAR WHEEL AND MALLEABLE. | | |
| Hanging Rock C. B..... | 30 | 00@31 00 |
| " " W. B..... | 23 | 00@26 00 |
| Southern Car-Wheel Iron..... | 24 | 50@26 50 |
| Lake Superior " "..... | 24 | 50@25 50 |
| " " Malleable..... | 24 | 50@25 50 |

The business of the week has been confined principally to an ordinary current

| | FOUNDRY. | Four Months. |
|--|----------|----------------|
| Hanging Rock Charcoal, No. 1..... | \$22 | 35¢@33 1/2 |
| " " " " " " " " " " " " " " " " | 2 | .. 35¢@32 1/2 |
| Strong Neutral Coke, " " " " " " " " " " " " | 2 | .. 18 50@19 00 |
| " " " " " " " " " " " " " " " " | 2 | .. 17 50@18 00 |
| American Scotch, " " " " " " " " " " " " | 1 | .. 19 00@19 50 |
| GREY FORGE. | | |
| Neutral Coke..... | 16 | 70¢@17 00 |
| Cold Short..... | 16 | 35¢@16 75 |
| CAR WHEEL AND MALLEABLE. | | |
| Hanging Rock, strictly cold blast..... | — | @27 75 |
| " " " " " " " " " " " " " " " " warm .. | 24 | 00¢@24 50 |
| South. Car Wheel, strictly cold blast..... | 26 | 50¢@27 50 |
| Lake Superior Charcoal, all grades..... | 34 | 00¢@35 00 |

Louisville Iron Market.

The demand for pig iron is lighter and the market slightly weaker in tone. The best brands of irons keep well sold up at full market prices. Some of the furnaces that are not making a first-class article are offering their iron at lower prices, and show disposition to make further concessions in order to effect sales. Car-wheel irons continue dull. Quote:

| FOUNDRY IRON. | | |
|---|---------|--------|
| No. 1 Hanging Rock Charcoal..... | \$22 00 | @24 00 |
| " 1 Southern Charcoal..... | 21 00 | @22 00 |
| " 1 Hanging Rock Stone Coal and Coke..... | 20 00 | @21 00 |
| " 1 Southern Stone Coal and Coke..... | 18 50 | @19 25 |
| " 2 " " " | 17 50 | @18 25 |
| American Scotch..... | 17 00 | @18 00 |
| Open Silver Gray..... | 16 50 | @17 50 |
| Close " " " | 16 00 | @17 00 |

| MILL IRONS. | | |
|--|----|----------|
| No. 1 Charcoal..... | 18 | 00@19 00 |
| " 1 Stone Coal and Coke, Neutral | 16 | 50@17 00 |
| " 2 " " " " | 15 | 75@16 50 |
| " 1 Stone Coal and Coke, Cold Short | 15 | 75@16 25 |
| " 2 Stone Coal and Coke, Cold Short | 15 | 50@16 00 |
| White and Mottled, Cold Short and Neutral..... | 14 | 50@15 00 |

| CAR-WHEEL IRONS. | | |
|--|----|----------|
| Hanging Rock Cold Blast..... | 28 | 00@30 00 |
| " " Warm " | 22 | 50@23 50 |
| Alabama and Georgia Warm and Cold Blast..... | 23 | 00@26 50 |
| Central Kentucky Cold Blast..... | 24 | 00@25 50 |
| All quotations in Iron, par. | | |

Specialty reported by W. B. BELKNAP & Co.,
Nails, Wire, Iron, Hardware, Carriage and
Wagon Goods.

There is still no improvement to note in bar iron, and while the amount produced certainly cannot be called excessive, yet it seems to be sufficient, for there is the exceptional state of affairs that March prices are no better than December's. The prospective June troubles, which are quite generally believed in, are not close enough at hand to stimulate buying. This effect

Wire.—This is one exception to the general line of weakness. The plain wire have all stiffened somewhat, and the barb very materially. The destruction of fences by floods this winter has been immense, and almost the whole replacement will be made with wire,—a great saving to the timber of the country, which is becoming daily more valuable.

St. Louis Iron Market.

The market continues quiet; some iron selling, and prices remain about the same. We quote:

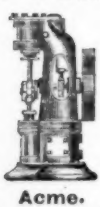
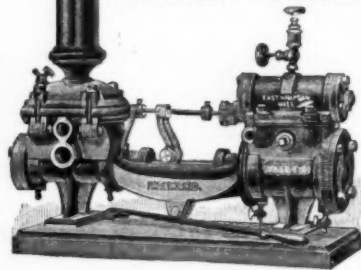
| HOT-BLAST CHARCOAL. | |
|---------------------|---------------|
| Missouri..... | \$19 50@20 50 |
| Southern..... | 30 00@22 00 |
| Ohio..... | 34 00@26 00 |
| COKE AND COAL. | |
| Missouri..... | 19 50@20 50 |
| Southern..... | 18 50@19 50 |
| Ohio..... | 21 00@25 00 |

Richmond Iron Market.

The iron market continues in a quiet condition, transactions being chiefly for small lots. Prices as follows:

| PIG IRONS. | | |
|--------------------------------------|---------|--------|
| No. 1 Scotch Pig Iron..... | \$23 00 | @25 00 |
| No. 1 Anthracite..... | 22 00 | @22 00 |
| No. 2 Anthracite..... | 21 00 | @22 00 |
| No. 3 Anthracite..... | 19 16 | @21 00 |
| No. 1 Virginia Coke..... | 19 00 | @20 00 |
| No. 3 Virginia Coke..... | 17 00 | @18 00 |
| No. 1 Virginia Coke Mill Iron..... | 16 00 | @17 00 |
| White and mottled..... | — | @16 00 |
| Virgin C. B. Wheel..... | 23 00 | @24 00 |
| Old Rails..... | 20 00 | @20 00 |
| No. 1 Wrought Scrap..... | 19 00 | @20 00 |
| No. 1 Machinery Scrap..... | 17 50 | @18 00 |
| Old Dominion Nails ♀ keg..... | — | @ 2 75 |
| Richmond Refined Bar Iron, ♀ lb..... | — | @ 2 00 |
| Horse-Shoes, (Tredgear,) ♀ keg..... | — | @ 4 00 |
| Mule-Shoes, (Tredgear,) ♀ keg..... | — | @ 5 00 |

STEAM PUMPS FOR EVERY DUTY.



**Best
Boiler Feed
PUMPS
in the
World.**



Acme. Bucket Plunger.
VALLEY MACHINE CO.,
Easthampton, Mass.

Remington Standard Type-Writer

THE STANDARD WRITING MACHINE OF THE WORLD.



on the machine. It facilitates composition, as the manipulation becomes purely mechanical, and owing to its greater speed the mind does not lose its freshest and best thoughts, as when waiting for the slow pen to catch up. In use throughout the world. Perfect satisfaction guaranteed. Send for illustrated pamphlet, with testimonials.

WYCKOFF, SEAMANS & BENEDICT, 281 and 283 Broadway, New York.

— **JOHN MERRY,** —
West Side Galvanizing Works,
 535 to 547 West 15th Street, New York,

— MANUFACTURER OF —
 The "LION" and "PHENIX" Brands of Galvanized Sheet Iron.
 Corrugated Iron for Roofing or Siding, Tin Plates, Solder, Slatting and Roofing Nails, Tinned,
 Galvanized and Black. All kinds of Iron work Galvanized or Tinned to order.

PEERLESS Pressure Recording Gages

make a perfect record of all Steam, Water or Gaseous Pressures. **Best and Cheapest Gage in the world.** SEND FOR CIRCULAR. FOR SALE BY THE TRADE.

S. P. JONES, 28 SCHOOL STREET, BOSTON, MASS.

OVER THIRTY COMBINATIONS
 MADE BY ONE APPARATUS.

HEALTH

— BY —
EXERCISE,
 ADAPTED FOR
FAMILIES OR SCHOOLS.

Used and recommended by Physicians all
 over the country. Can be seen day
 or evening at the office of

GIFFORD BROTHERS,

Home Gymnasium Mfg. Co.
 483 Fifth Ave., New York.
 Illustrated Circular sent free.

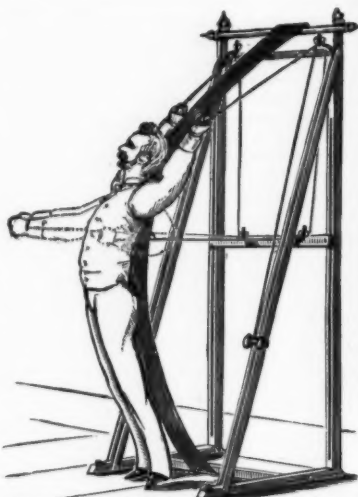


Fig. 9. CURVED BOARD—To strengthen the Back, Neck,
 Abdominal Muscles and Expand the Chest.

PATENT CLASP PULLEY

Made in Halves. Same Price as Whole Pulleys.

SHAFTING, HANGERS,

Castings of Every Description Made. Stationary, Distillery,
 Mill and Boiler Work.

JNO. N. MARQUETTE, 6 W. Falls Ave., Baltimore.

Union File Works

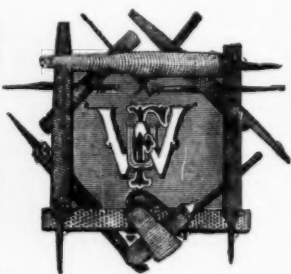
311 to 315 North St., Baltimore, Md.

FILES AND RASPS

Made from the Best Refined Cast Steel.

With all the requisite facilities to produce a first-class article, we are enabled to offer Files that will give entire satisfaction.

MORITZ & KEIDEL, Agents, 48 and 50 German St., Baltimore, Md.



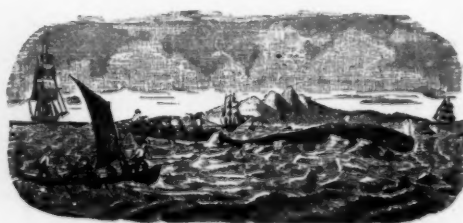
Business Established 1832 (on Present Premises.) The Oldest House in the Trade.

WM. C. ROBINSON & SON

81 SOUTH ST., BALTIMORE, MD.

MANUFACTURERS OF
 AND
 Wholesale Dealers in

OILS.



Specialties—Oils for Cotton and Woolen Mills, Railways, Tanners' and Machinery Use.

We always have in stock **OILS** for every known purpose. Agents for Downer's Spindle, Champion and Mineral Spindle, Meriam & Morgan Paraffine Co.'s Paraffine, and Williams' Odorless Lubriphene **OILS**.



**THE ECLIPSE
 HAND PIPE-
 CUTTING
 MACHINE.**
 Just the Tool for Mill,
 Factory, Machine-
 Shop, or Pipe-
 Fitters.

With it one man
 can easily cut off
 and thread 6-inch
 Pipe by hand.

- No. 1
 Cuts $\frac{1}{4}$ to 2 in.
 No. 2
 Cuts $\frac{1}{2}$ to 4 in.
 No. 3
 Cuts $\frac{3}{4}$ to 6 in.

FOR PLUMBERS, MILLS,
 FACTORIES, &c.

THE ROUSE PIPE-WRENCH
 Is the Simplest and Strongest Pipe-Wrench
 in the Market. Drop Forged from
 Best Tool Steel.

For full particulars of both these Tools, address
 and mention this Paper,

PANCOAST & MAULE,

243 & 245 South Third Street,
 PHILADELPHIA.



A. EDW. BARTHEL, ENGINEER.

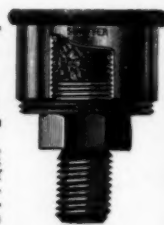
111 Liberty St., New York. P. O. Box 2837.

SOLE MANUFACTURER OF THE

REISERT, STAUFFER AND BARTHEL

Lubricators and Solidified Oil

The most economical, perfect, practical, simplest,
 cheapest and elegantly finished Lubricators ever put
 on the market. One million sold within a couple of
 years. The Barthel Solidified Oil or Lubricating
 Compound is used with the Lubricators exclusively. Whoever has once tried this
 Lubricant will never again use oil or any other lubricating
 compounds. Send for Illustrated Catalogue.



JOHN R. EDWARDS,

Blank Book Manufacturer,

LITHOGRAPHER, PRINTER AND STATIONER,

2, 4, 6, 8, 10 and 12 North St. and 120 and 122 W. Baltimore St.

— BALTIMORE, MD. —

Specialty: Account Books to order for Manufacturing Establishments, Banks
 and Insurance Companies. Estimates Furnished.

Roll, Sheet and Platers' Brass,

— GERMAN SILVER, —

COPPER, BRASS AND GERMAN SILVER WIRE,

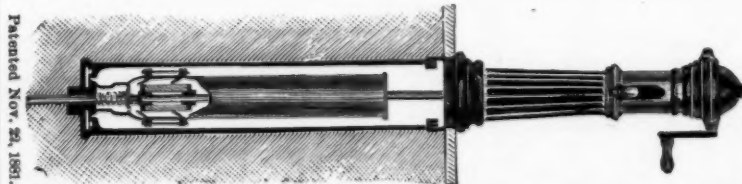
BRASS and COPPER TUBING,

BATTERY and PLATERS' SILVER, &c.

PHILIP R. VOGEL, JR.

Manufacturers' Agent,

No. 79 German Street, Baltimore, Md.



W. J. CLARK & BRO., Manufacturers of Hydrants

No. 33 N. Holliday Street, BALTIMORE, MD.

These Hydrants are made of the best material, and are guaranteed to be entirely non-wasting and non-freezing. The works of these Hydrants can be taken out and repaired without breaking the ground. SEND FOR CIRCULAR.

HYDRANTS.

L. P. CLARK & SONS, Works. Also manufacturers of non-freezing and non-wasting HYDRANTS, Water Closets, &c.
 The works of these Hydrants can be taken out and repaired without breaking the ground.
 Established 1859. No. 34 N. Holliday Street.

JOSEPH B. MATTHEWS, 41 Centre Market Space, BALTIMORE, MD.

— MANUFACTURER OF THE —

MATTHEWS AUTOMATIC HIGH-SPEED ENGINE,

For Electric Lights and other purposes requiring steady, reliable power. The best and cheapest in the market. \$2 H. P. for \$200. SEND FOR CIRCULAR.



CRESCENT IRON WORKS,

REUTER & MALLORY, Proprietors.

MANUFACTURERS OF

Cast Iron Soil Pipe, Fittings, Sinks, Plumbers' Supplies, ALL KINDS OF CASTINGS.

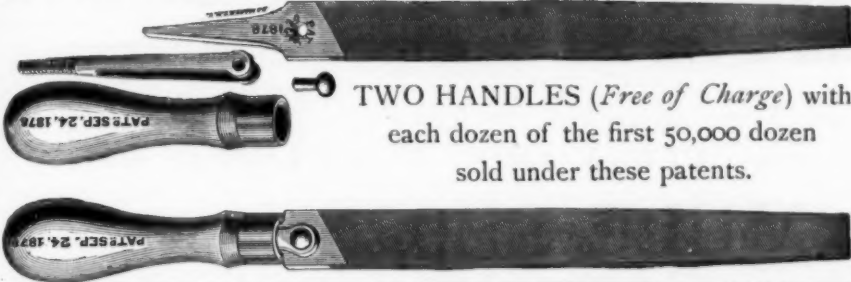
FOUNDRY, 19, 21 and 23 S. Front Street, Baltimore, Md.

Office and Warehouse, 22 LIGHT ST.

Also dealers in WROUGHT-IRON PIPE for Steam, Water and Gas. GUM AND LEATHER BELTING and MANUFACTURERS' SUPPLIES GENERALLY. Send for Price-List.

NEW AMERICAN FILE COMP'Y.

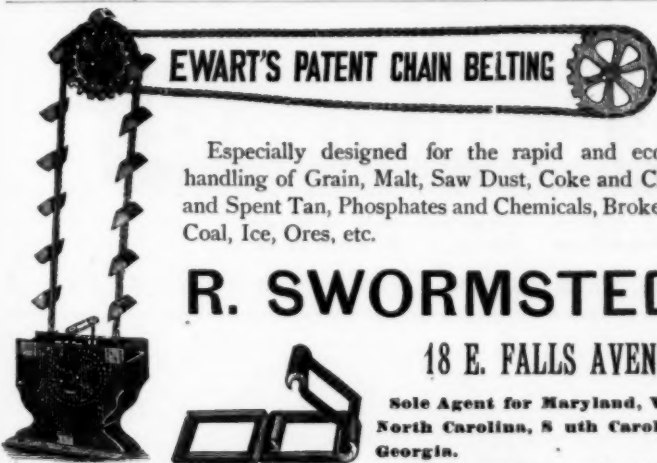
ESTABLISHED 1863.



TWO HANDLES (Free of Charge) with each dozen of the first 50,000 dozen sold under these patents.

DAILY CAPACITY, 1,000 DOZEN.

PAWTUCKET, R.I., U.S.



EWART'S PATENT CHAIN BELTING

Especially designed for the rapid and economical handling of Grain, Malt, Saw Dust, Coke and Clay, Dry and Spent Tan, Phosphates and Chemicals, Broken Stone, Coal, Ice, Ores, etc.

R. SWORMSTEDT,

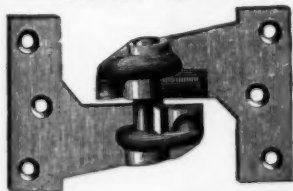
18 E. FALLS AVENUE,

Sole Agent for Maryland, Virginia, North Carolina, South Carolina and Georgia.

Send for Illustrated Catalogue.

Please mention this paper.

THE CLARK MFG. CO.



MANUFACTURERS OF
Builders' Hardware, Door Butts, Door Locks,
DOOR KNOBS, (with Patented Improvements.)
Of Genuine Bronze and Other Finishes.
SHUTTER HINGES, GATE HINGES, PULLEYS, &c.
BUFFALO, N. Y.

The True Idea of Assurance.

Women's Mutual Insurance

and ACCIDENT COMPANY.

PRESIDENT.

ELIZABETH B. PHELPS.

FANNY M. GERARD, Treas. ELIZABETH S. ROBERTS, Secy.

VICE-PRESIDENT.

MARGARET HOLCOMBE.

CORNELIA KAMPING, Actuary.

MEDICAL EXAMINERS.

ALFRED K. HILLS, M. D., 465 Fifth Avenue.

MARY PUTNAM JACOBI, M. D., 110 W. 34th St.

JOHN A. KAMPING, Attorney and Counsel, 138 Broadway, New York.

The Company is incorporated under the Laws of New York, approved by the Supreme Court and Superintendent of the Insurance Department, and subject to the latter's supervision.

ITS OBJECT

is surely and cheaply to provide an indemnity for loss by death and accidental disablement.

ITS PLAN

consists in assessing the members ratably according to age in the Life Class, and according to occupation or degree of risk in the Accident Class whenever a loss in either class occurs. In other words, the actual losses only are paid by the policy holders, which thus secures insurance of cost.

ITS MEMBERSHIP

comprises persons between the ages of 16 and 67, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for losses only occurring in the class to which they belong. This company, having been organized for the purpose of removing the prejudices which created discrimination in Life Insurance against women, has adopted the broad principle of no discrimination in membership on account of sex.

This Company requires Agents in every city, town and village, to whom liberal terms will be given. Address as above.

ITS SAFETY AND SECURITY

consists in its economical system, its certainty of solvency, (for it incurs no risk but what the members may discharge by one assessment,) and its Security Reserve Fund, which in time, it is calculated, will make a member's membership self-sustaining.

ITS RATES OF ASSESSMENT

are safer than those adopted by others, and are no more expensive.

FINALLY.

This company confines itself to the legitimate business for which insurance has been accorded protective and encouraging legislation; it proposes to adhere strictly to business principles in its management, and to establish the fullest protection to its members in a manner the simplest, cheapest and most complete of any organization of equal safety. Membership may be acquired by letter.

Apply to

ELIZABETH S. ROBERTS, Secretary,

238 Fourth Avenue, New York.

Address as above.



PORTABLE FORGES

Empire Portable Forge Co.
Cohoes, N. Y.

Send for Catalogue.

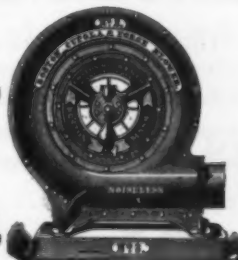
REUTER & MALLORY,

No. 22 LIGHT ST., BALTIMORE, MD.

SOLE SOUTHERN AGENTS FOR

Reading Bolt and Nut Works.

Manufacturers of
Bolts, Nuts, Washers,
LAG SCREWS, &c.
Dealers in
Gum & Leather Belting.



Wrought Iron Pipe,
FOR
STEAM, WATER AND
GAS, and
Railroad, Machinists' and Mfrs.
Supplies Generally.

SEND FOR PRICE LISTS.



COVERT'S Patent HARNESS SNAPS,

Chain and Rope Goods, Adjustable Soldering Irons, &c.

These Goods are sold by all Leading Jobbers in General and Saddlery Hardware at manufacturers' prices. Send for Illustrated Catalogue and Price-List.

Covert Mfg. Co., West Troy, N. Y.

Baltimore Engineering Agency

Buckeye Automatic Engines.

Self Retort Furnaces For Steam Boilers.

Engine & Boiler Plants a Specialty.

With our combination the best economy guaranteed.

CONDENSERS, HEATERS,
—PUMPS, &c.—

Office, No. 42 N. Holliday St., BALTIMORE.

W. J. CHAPMAN,

Direct Shipper
of
COAL AND

Special attention given to orders from found-
ers and machinists.
Office, York and
William Sts.

HAMILL, BROWN & CO. Maryland Queensware Factory.
Manufacturers of Stone China, White
Granite, C. C. and Decorated Ware.
Corner Fawn and President Sts.

SAML. G. B. COOK & CO., HARDWARE

MANUFACTURERS' AGENTS

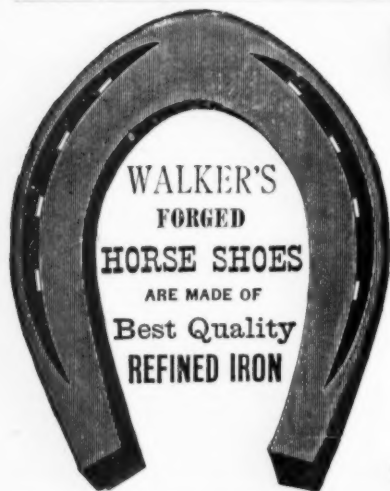
63, 65, 67 and 69 German St., BALTIMORE, MD.

AGENTS FOR

T. V. Allis Mfg. Co.—Buckthorn Wire.
American Screw Co.—Screws, Rivets, Bolts, etc.
Branford Lock Works.
Boss Molasses Gates.
Carr & Crawley.—Shelf and Carriage Hardware.
Lancaster Bolt Co.—Eagle Carriage Bolts.
Lawson & Brenizer.—Hay and Manure Forks.
Meriden Britannia Co.—Rogers Bros.' All Plated Goods.
Northwestern Horse Nail Co.
Nicholson File Co.
Nauvutuck Cutlery Co.

Clark Hardware Co.—Spring Butts, Screen Frames, etc.
Cowles Hardware Co.—Gears, Butts, Screw Drivers, etc.
H. Chapin's Sons.—Rules, Levels, Gauges, etc.
Clark Bros. & Co.—Bolts.
Essex Horse Nails.
A. Field & Sons.—Tacks, Finishing Nails, etc.
Hubbard, Bakewell & Co.—Lippincott Axes, Saws, Shovels and Hoes.
Holroyd & Co.—Stocks and Dies.
Henry W. Klipp.—Hammers.
Klein, Logan & Co.—Picks, Mattocks, Sledges, etc.
Kimball's Patent Shovels and Spades.
Lockwood Steel Hoes.

Peck Bros. & Co.—Brass Cocks.
Payson Mfg. Co.—Building Hardware.
Patton Mfg. Co.—Enameled and Tin'd Hollow Ware.
Roy & Co.—Strap and T Hinges and Wrought Butts.
Sarason Horse Nail Co.
Scott Mfg. Co.—Peach and Apple Parers, etc.
George M. Scott.—Blacksmith Bellows.
Wilson Mfg. Co.—Coffee Mills, Vises and Ship Hardware.
Walker's Horse and Mule Shoes.
International and Fimlico Brand of Horse Nails, Foreign and Domestic Hardware, Cutlery, Chains, Pistols, etc.



Walker Horse Shoe Co., Baltimore, Md.

Of Superior Shape and Finish.

CLEAN CREASE OF PROPER WIDTH AND DEPTH. Nail Holes Punched Through at Proper Angles.

Free from Burs. Outside Edges Smooth and Free from Bulges. Popular with all Shoers, as they are easily fitted. **EVERY SHOE WARRANTED.** ALSO,

MULE SHOES,

Of Superior Pattern, Quality and Shape.

Sole Patentees and Manufacturers.

JACKSON & TYLER BALTIMORE.

MACHINERY, TOOLS AND SUPPLIES.

Shafting, Hangers and Pulleys, Belting, &c., Sombart Gas Engines, Baxter Steam Engines. Send for New Illustrated Catalogue.

ESTABLISHED 1856.

CARLIN & FULTON,

Wholesale Dealers in

HARDWARE

Agents for Sale of

BLOOD'S AXES, IOWA BARB WIRE,
GAUTIER STEEL PLOW SHAPES, RODGERS & BRITTIN PLATED WARE.

20 SOUTH HOWARD STREET,
AND 24 S. LIBERTY STREET,
BALTIMORE, MD.

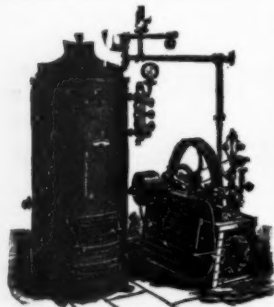
EDWARD KIRMSS

338 East 23d Street, NEW YORK.

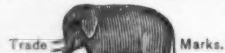
MANUFACTURER OF
SNYDER'S LITTLE GIANT
HORIZONTAL

Engine & Boiler
Also, Yacht Engines.

Send for New Illustrated Catalogue, mentioning this Paper.
Wm. R. Emerson, Baltimore,
Genl. Agt. for the Southern States.



PHOSPHOR-BRONZE



"Phosphor-Bronze."

The celebrated alloys in Wire, Rods, Sheets, Bolts,
Wire Ropes, Wire Cloth, Castings, Ingots, etc.
Pamphlets and particulars on application to

THE PHOSPHOR-BRONZE SMELTING CO., Limited,
No. 512 ARCH STREET, PHILADELPHIA, PA.
Owners of the U. S. Phosphor-Bronze Patents.
Sole Manufacturers of Phosphor-Bronze in the United States.

Winans' Packing Mfg. Co.

SOLE MANUFACTURERS.



Samples and Circulars sent by mail on application.

408 BLEECKER ST., NEW YORK.

White Mountain Freezer Co.

MANUFACTURERS OF

SANDS' PATENT TRIPLE MOTION

White Mountain Ice-Cream Freezer.

The only Freezer ever made having three distinct motions, thereby producing finer, smoother Cream than any other Freezer on the market. Acknowledged by every one to be the best in the world. Over 300,000 in use to-day. Outside Irons galvanized, but all inside the can coated with Pure Black Tin. Tube water-proof, machinery easily adjusted and operated. We also carry large stock of Packing Tubs, Packing Cans, Ice Crushers, &c. Send for Price List and Trade Discounts.

—Address—

White Mountain Freezer Co.

102 E. HOLLIS ST., NASHUA, N. H.



GOVERNORS

For Water Wheels

Cohoes Iron Foundry & Mch. Co. Send for Catalogue. Cohoes, N. Y.

HARDWARE.

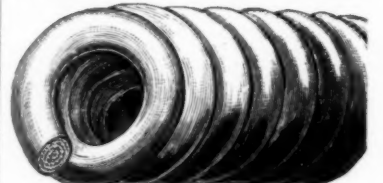
Baltimore WHOLESALE Prices.

| ANVILS. | |
|--|---------------|
| Eagle and Vulcan..... | 10c |
| Wright's..... | 10c |
| Armstrong's Mouse Hole..... | 10c |
| Trenton..... | 10c |
| Wilkinson's..... | 10c |
| AUGERS AND BITS. | |
| Conn. Valley Mfg. Co..... | dis 60 |
| Douglas Mfg. Co..... | from list of |
| Cook's Douglas Mfg. Co..... | Jan. 7, 1880. |
| Grissold..... | dis 50 |
| Patent Solid Head..... | dis 50 |
| Russell Jennings' Auger, Dowel, Machine..... | dis 50 |
| Dowel and Hand Rail Bits..... | dis 10 |
| Ives' "Jennings" Bits..... | dis 40 |
| Expansive Bits, Clark's, small..... | dis 25 |
| Expansive Bits, Ives'..... | dis 35 |
| Expansive Bits, Blake's..... | dis 40 |
| Hollow Augers, Ives'..... | dis 35 |
| Hollow Augers, Douglas..... | dis 35 |
| Hol. Aug. "Bonney's" Adjust..... | dis 35 |
| Hol. Aug. "Stearns" Adjust..... | dis 35 |
| Hol. Aug. Ives' Expansive, each..... | dis 35 |
| Hol. Aug. Universal Expansive, each..... | dis 35 |
| Wood's..... | dis 35 |
| Gimlet Bits..... | dis 50 |
| Gimlet Bits, Diamond..... | dis 40 |
| Double Cut Gimlet Bits, Shephardson's..... | dis 40 |
| Double Cut Gimlet Bits, Douglas..... | dis 35 |
| Double Cut Gimlet Bits, Ives'..... | dis 50 |
| Morse's Bit Gimlet Drill..... | dis 15 |
| L'Hommedieu's Ship Augers..... | dis 15 |
| AWL HAFES. | |
| Sewing Brass Ferrule..... | dis 40 |
| Patent Sewing, Short..... | dis 40 |
| Patent Sewing, Long..... | dis 40 |
| Patent Peg, Plain Top..... | dis 40 |
| Patent Peg, Leather Top..... | dis 40 |
| AWLS, BRAD SETS, &c. | |
| Awls, Sewing, Common..... | dis 75 |
| Awls, Shouldered Peg..... | dis 75 |
| Awls, Patent Peg..... | dis 75 |
| Awls, Shouldered Brad..... | dis 75 |
| Awls, Handmade Brad..... | dis 75 |
| Brad Sets, Alken's..... | dis 75 |
| Brad Sets, No. 42, 10c, No. 43, 12c, No. 44, 15c..... | dis 75 |
| Brad Sets, Stanley's, No. 1, 10c, No. 2, 15c, No. 3, 20c, No. 4, 25c, No. 5, 30c, No. 6, 35c, No. 7, 40c, No. 8, 45c, No. 9, 50c, No. 10, 55c, No. 11, 60c, No. 12, 65c, No. 13, 70c, No. 14, 75c, No. 15, 80c, No. 16, 85c, No. 17, 90c, No. 18, 95c, No. 19, 1.00, No. 20, 1.05, No. 21, 1.10, No. 22, 1.15, No. 23, 1.20, No. 24, 1.25, No. 25, 1.30, No. 26, 1.35, No. 27, 1.40, No. 28, 1.45, No. 29, 1.50, No. 30, 1.55, No. 31, 1.60, No. 32, 1.65, No. 33, 1.70, No. 34, 1.75, No. 35, 1.80, No. 36, 1.85, No. 37, 1.90, No. 38, 1.95, No. 39, 2.00, No. 40, 2.05, No. 41, 2.10, No. 42, 2.15, No. 43, 2.20, No. 44, 2.25, No. 45, 2.30, No. 46, 2.35, No. 47, 2.40, No. 48, 2.45, No. 49, 2.50, No. 50, 2.55, No. 51, 2.60, No. 52, 2.65, No. 53, 2.70, No. 54, 2.75, No. 55, 2.80, No. 56, 2.85, No. 57, 2.90, No. 58, 2.95, No. 59, 3.00, No. 60, 3.05, No. 61, 3.10, No. 62, 3.15, No. 63, 3.20, No. 64, 3.25, No. 65, 3.30, No. 66, 3.35, No. 67, 3.40, No. 68, 3.45, No. 69, 3.50, No. 70, 3.55, No. 71, 3.60, No. 72, 3.65, No. 73, 3.70, No. 74, 3.75, No. 75, 3.80, No. 76, 3.85, No. 77, 3.90, No. 78, 3.95, No. 79, 4.00, No. 80, 4.05, No. 81, 4.10, No. 82, 4.15, No. 83, 4.20, No. 84, 4.25, No. 85, 4.30, No. 86, 4.35, No. 87, 4.40, No. 88, 4.45, No. 89, 4.50, No. 90, 4.55, No. 91, 4.60, No. 92, 4.65, No. 93, 4.70, No. 94, 4.75, No. 95, 4.80, No. 96, 4.85, No. 97, 4.90, No. 98, 4.95, No. 99, 5.00, No. 100, 5.05, No. 101, 5.10, No. 102, 5.15, No. 103, 5.20, No. 104, 5.25, No. 105, 5.30, No. 106, 5.35, No. 107, 5.40, No. 108, 5.45, No. 109, 5.50, No. 110, 5.55, No. 111, 5.60, No. 112, 5.65, No. 113, 5.70, No. 114, 5.75, No. 115, 5.80, No. 116, 5.85, No. 117, 5.90, No. 118, 5.95, No. 119, 6.00, No. 120, 6.05, No. 121, 6.10, No. 122, 6.15, No. 123, 6.20, No. 124, 6.25, No. 125, 6.30, No. 126, 6.35, No. 127, 6.40, No. 128, 6.45, No. 129, 6.50, No. 130, 6.55, No. 131, 6.60, No. 132, 6.65, No. 133, 6.70, No. 134, 6.75, No. 135, 6.80, No. 136, 6.85, No. 137, 6.90, No. 138, 6.95, No. 139, 7.00, No. 140, 7.05, No. 141, 7.10, No. 142, 7.15, No. 143, 7.20, No. 144, 7.25, No. 145, 7.30, No. 146, 7.35, No. 147, 7.40, No. 148, 7.45, No. 149, 7.50, No. 150, 7.55, No. 151, 7.60, No. 152, 7.65, No. 153, 7.70, No. 154, 7.75, No. 155, 7.80, No. 156, 7.85, No. 157, 7.90, No. 158, 7.95, No. 159, 8.00, No. 160, 8.05, No. 161, 8.10, No. 162, 8.15, No. 163, 8.20, No. 164, 8.25, No. 165, 8.30, No. 166, 8.35, No. 167, 8.40, No. 168, 8.45, No. 169, 8.50, No. 170, 8.55, No. 171, 8.60, No. 172, 8.65, No. 173, 8.70, No. 174, 8.75, No. 175, 8.80, No. 176, 8.85, No. 177, 8.90, No. 178, 8.95, No. 179, 9.00, No. 180, 9.05, No. 181, 9.10, No. 182, 9.15, No. 183, 9.20, No. 184, 9.25, No. 185, 9.30, No. 186, 9.35, No. 187, 9.40, No. 188, 9.45, No. 189, 9.50, No. 190, 9.55, No. 191, 9.60, No. 192, 9.65, No. 193, 9.70, No. 194, 9.75, No. 195, 9.80, No. 196, 9.85, No. 197, 9.90, No. 198, 9.95, No. 199, 1.00, No. 200, 1.05, No. 201, 1.10, No. 202, 1.15, No. 203, 1.20, No. 204, 1.25, No. 205, 1.30, No. 206, 1.35, No. 207, 1.40, No. 208, 1.45, No. 209, 1.50, No. 210, 1.55, No. 211, 1.60, No. 212, 1.65, No. 213, 1.70, No. 214, 1.75, No. 215, 1.80, No. 216, 1.85, No. 217, 1.90, No. 218, 1.95, No. 219, 2.00, No. 220, 2.05, No. 221, 2.10, No. 222, 2.15, No. 223, 2.20, No. 224, 2.25, No. 225, 2.30, No. 226, 2.35, No. 227, 2.40, No. 228, 2.45, No. 229, 2.50, No. 230, 2.55, No. 231, 2.60, No. 232, 2.65, No. 233, 2.70, No. 234, 2.75, No. 235, 2.80, No. 236, 2.85, No. 237, 2.90, No. 238, 2.95, No. 239, 3.00, No. 240, 3.05, No. 241, 3.10, No. 242, 3.15, No. 243, 3.20, No. 244, 3.25, No. 245, 3.30, No. 246, 3.35, No. 247, 3.40, No. 248, 3.45, No. 249, 3.50, No. 250, 3.55, No. 251, 3.60, No. 252, 3.65, No. 253, 3.70, No. 254, 3.75, No. 255, 3.80, No. 256, 3.85, No. 257, 3.90, No. 258, 3.95, No. 259, 4.00, No. 260, 4.05, No. 261, 4.10, No. 262, 4.15, No. 263, 4.20, No. 264, 4.25, No. 265, 4.30, No. 266, 4.35, No. 267, 4.40, No. 268, 4.45, No. 269, 4.50, No. 270, 4.55, No. 271, 4.60, No. 272, 4.65, No. 273, 4.70, No. 274, 4.75, No. 275, 4.80, No. 276, 4.85, No. 277, 4.90, No. 278, 4.95, No. 279, 5.00, No. 280, 5.05, No. 281, 5.10, No. 282, 5.15, No. 283, 5.20, No. 284, 5.25, No. 285, 5.30, No. 286, 5.35, No. 287, 5.40, No. 288, 5.45, No. 289, 5.50, No. 290, 5.55, No. 291, 5.60, No. 292, 5.65, No. 293, 5.70, No. 294, 5.75, No. 295, 5.80, No. 296, 5.85, No. 297, 5.90, No. 298, 5.95, No. 299, 6.00, No. 300, 6.05, No. 301, 6.10, No. 302, 6.15, No. 303, 6.20, No. 304, 6.25, No. 305, 6.30, No. 306, 6.35, No. 307, 6.40, No. 308, 6.45, No. 309, 6.50, No. 310, 6.55, No. 311, 6.60, No. 312, 6.65, No. 313, 6.70, No. 314, 6.75, No. 315, 6.80, No. 316, 6.85, No. 317, 6.90, No. 318, 6.95, No. 319, 7.00, No. 320, 7.05, No. 321, 7.10, No. 322, 7.15, No. 323, 7.20, No. 324, 7.25, No. 325, 7.30, No. 326, 7.35, No. 327, 7.40, No. 328, 7.45, No. 329, 7.50, No. 330, 7.55, No. 331, 7.60, No. 332, 7.65, No. 333, 7.70, No. 334, 7.75, No. 335, 7.80, No. 336, 7.85, No. 337, 7.90, No. 338, 7.95, No. 339, 8.00, No. 340, 8.05, No. 341, 8.10, No. 342, 8.15, No. 343, 8.20, No. 344, 8.25, No. 345, 8.30, No. 346, 8.35, No. 347, 8.40, No. 348, 8.45, No. 349, 8.50, No. 350, 8.55, No. 351, 8.60, No. 352, 8.65, No. 353, 8.70, No. 354, 8.75, No. 355, 8.80, No. 356, 8.85, No. 357, 8.90, No. 358, 8.95, No. 359, 9.00, No. 360, 9.05, No. 361, 9.10, No. 362, 9.15, No. 363, 9.20, No. 364, 9.25, No. 365, 9.30, No. 366, 9.35, No. 367, 9.40, No. 368, 9.45, No. 369, 9.50, No. 370, 9.55, No. 371, 9.60, No. 372, 9.65, No. 373, 9.70, No. 374, 9.75, No. 375, 9.80, No. 376, 9.85, No. 377, 9.90, No. 378, 9.95, No. 379, 1.00, No. 380, 1.05, No. 381, 1.10, No. 382, 1.15, No. 383, 1.20, No. 384, 1.25, No. 385, 1.30, No. 386, 1.35, No. 387, 1.40, No. 388, 1.45, No. 389, 1.50, No. 390, 1.55, No. 391, 1.60, No. 392, 1.65, No. 393, 1.70, No. 394, 1.75, No. 395, 1.80, No. 396, 1.85, No. 397, 1.90, No. 398, 1.95, No. 399, 2.00, No. 400, 2.05, No. 401, 2.10, No. 402, 2.15, No. 403, 2.20, No. 404, 2.25, No. 405, 2.30, No. 406, 2.35, No. 407, 2.40, No. 408, 2.45, No. 409, 2.50, No. 410, 2.55, No. 411, 2.60, No. 412, 2.65, No. 413, 2.70, No. 414, 2.75, No. 415, 2.80, No. 416, 2.85, No. 417, 2.90, No. 418, 2.95, No. 419, 3.00, No. 420, 3.05, No. 421, 3.10, No. 422, 3.15, No. 423, 3.20, No. 424, 3.25, No. 425, 3.30, No. 426, 3.35, No. 427, 3.40, No. 428, 3.45, No. 429, 3.50, No. 430, 3.55, No. 431, 3.60, No. 432, 3.65, No. 433, 3.70, No. 434, 3.75, No. 435, 3.80, No. 436, 3.85, No. 437, 3.90, No. 438, 3.95, No. 439, 4.00, No. 440, 4.05, No. 441, 4.10, No. 442, 4.15, No. 443, 4.20, No. 444, 4.25, No. 445, 4.30, No. 446, 4.35, No. 447, 4.40, No. 448, 4.45, No. 449, 4.50, No. 450, 4.55, No. 451, 4.60, No. 452, 4.65, No. 453, 4.70, No. 454, 4.75, No. 455, 4.80, No. 456, 4.85, No. 457, 4.90, No. 458, 4.95, No. 459, 5.00, No. 460, 5.05, No. 461, 5.10, No. 462, 5.15, No. 463, 5.20, No. 464, 5.25, No. 465, 5.30, No. 466, 5.35, No. 467, 5.40, No. 468, 5.45, No. 469, 5.50, No. 470, 5.55, No. 471, 5.60, No. 472, 5.65, No. 473, 5.70, No. 474, 5.75, No. 475, 5.80, No. 476, 5.85, No. 477, 5.90, No. 478, 5.95, No. 479, 6.00, No. 480, 6.05, No. 481, 6.10, No. 482, 6.15, No. 483, 6.20, No. 484, 6.25, No. 485, 6.30, No. 486, 6.35, No. 487, 6.40, No. 488, 6.45, No. 489, 6.50, No. 490, 6.55, No. 491, 6.60, No. 492, 6.65, No. 493, 6.70, No. 494, 6.75, No. 495, 6.80, No. 496, 6.85, No. 497, 6.90, No. 498, 6.95, No. 499, 7.00, No. 500, 7.05, No. 501, 7.10, No. 502, 7.15, No. 503, 7.20, No. 504, 7.25, No. 505, 7.30, No. 506, 7.35, No. 507, 7.40, No. 508, 7.45, No. 509, 7.50, No. 510, 7.55, No. 511, 7.60, No. 512, 7.65, No. 513, 7.70, No. 514, 7.75, No. 515, 7.80, No. 516, 7.85, No. 517, 7.90, No. 518, 7.95, No. 519, 8.00, No. 520, 8.05, No. 521, 8.10, No. 522, 8.15, No. 523, 8.20, No. 524, 8.25, No. 525, 8.30, No. 526, 8.35, No. 527, 8.40, No. 528, 8.45, No. 529, 8.50, No. 530, 8.55, No. 531, 8.60, No. 532, 8.65, No. 533, 8.70, No. 534, 8.75, No. 535, 8.80, No. 536, 8.85, No. 537, 8.90, No. 538, 8.95, No. 539, 9.00, No. 540, 9.05, No. 541, 9.10, No. 542, 9.15, No. 543, 9.20, No. 544, 9.25, No. 545, 9.30, No. 546, 9.35, No. 547, 9.40, No. 548, 9.45, No. 549, 9.50, No. 550, 9.55, No. 551, 9.60, No. 552, 9.65, No. 553, 9.70, No. 554, 9.75, No. 555, 9.80, No. 556, 9.85, No. 557, 9.90, No. 558, 9.95, No. 559, 1.00, No. 560, 1.05, No. 561, 1.10, No. 562, 1.15, No. 563, 1.20, No. 564, 1.25, No. 565, 1.30, No. 566, 1.35, No. 567, 1.40, No. 568, 1.45, No. 569, 1.50, No. 570, 1.55, No. 571, 1.60, No. 572, 1.65, No. 573, 1.70, No. 574, 1.75, No. 575, 1.80, No. 576, 1.85, No. 577, 1.90, No. 578, 1.95, No. 579, 2.00, No. 580, 2.05, No. 581, 2.10, No. 582, 2.15, No. 583, 2.20, No. 584, 2.25, No. 585, 2.30, No. 586, 2.35, No. 587, 2.40, No. 588, 2.45, No. 589, 2.50, No. 590, 2.55, No. 591, 2.60, No. 592, 2.65, No. 593, 2.70, No. 594, 2.75, No. 595, 2.80, No. 596, 2.85, No. 597, 2.90, No. 598, 2.95, No. 599, 3.00, No. 600, 3.05, No. 601, 3.10, No. 602, 3.15, No. 603, 3.20, No. 604, 3.25, No. 605, 3.30, No. 606, 3.35, No. 607, 3.40, No. 608, 3.45, No. 609, 3.50, No. 610, 3.55, No. 611, 3.60, No. 612, 3.65, No. 613, 3.70, No. 614, 3.75, No. 615, 3.80, No. 616, 3.85, No. 617, 3.90, No. 618, 3.95, No. 619, 4.00, No. 620, 4.05, No. 621, 4.10, No. 622, 4.15, No. 623, 4.20, No. 624, 4.25, No. 625, 4.30, No. 626, 4.35, No. 627, 4.40, No. 628, 4.45, No. 629, 4.50, No. 630, 4.55, No. 631, 4.60, No. 632, 4.65, No. 633, 4.70, No. 634, 4.75, No. 635, 4.80, No. 636, 4.85, No. 637, 4.90, No. 638, 4.95, No. 639, 5.00, No. 640, 5.05, No. 641, 5.10, No. 642, 5.15, No. 643, 5.20, No. 644, 5.25, No. 645, 5.30, No. 646, 5.35, No. 647, 5.40, No. 648, 5.45, No. 649, 5.50, No. 650, 5.55, No. 651, 5.60, No. 652, 5.65, No. 653, 5.70, No. 654, 5.75, No. 655, 5.80, No. 656, 5.85, No. 657, 5.90, No. 658, 5.95, No. 659, 6.00, No. 660, 6.05, No. 661, 6.10, No. 662, 6.15, No. 663, 6.20, No. 664, 6.25, No. 665, 6.30, No. 666, 6.35, No. 667, 6.40, No. 668, 6.45, No. 669, 6.50, No. 670, 6.55, No. 671, 6.60, No. 672, 6.65, No. 673, 6.70, No. 674, 6.75, No. 675, 6.80, No. 676, 6.85, No. 677, 6.90, No. 678, 6.95, No. 679, 7.00, No. 680, 7.05, No. 681, 7.10, No. 682, 7.15, No. 683, 7.20, No. 684, 7.25, No. 685, 7.30, No. 686, 7.35, No. 687, 7.40, No. 688, 7.45, No. 689, 7.50, No. 690, 7.55, No. 691, 7.60, No. 692, 7.65, No. 693, 7.70, No. 694, 7.75, No. 695, 7.80, No. 696, 7.85, No. 697, 7.90, No. 698, 7.95, No. 699, 8.00, No. 700, 8.05, No. 701, 8.10, No. 702, 8.15, No. 703, 8.20, No. 704, 8.25, No. 705, 8.30, No. 706, 8.35, No. 707, 8.40, No. 708, 8.45, No. 709, 8.50, No. 710, 8.55, No. 711, 8.60, No. 712, 8.65, No. 713, 8.70, No. 714, 8.75, No. 715, 8.80, No. 716, 8.85, No. 717, 8.90, No. 718, 8.95, No. 719, 9.00, No. 720, 9.05, No. 721, 9.10, No. 722, 9.15, No. 723, 9.20, No. 724, 9.25, No. 725, 9.30, No. 726, 9.35, No. 727, 9.40, No. 728, 9.45, No. 729, 9.50, No. 730, 9.55, No. 731, 9.60, No. 732, 9.65, No. 733, 9.70, No. 734, 9.75, No. 735, 9.80, No. 736, 9.85, No. 737, 9.90, No. 738, 9.95, No. 739, 1.00, No. 740, 1.05, No. 741, 1.10, No. 742, 1.15, No. 743, 1.20, No. 744, 1.25, No. 745, 1.30, No. 746, 1.35, No. 747, 1.40, No. 748, 1.45, No. 749, 1.50, No. 750, 1.55, No. 751, 1.60, No. 752, 1.65, No. 753, 1.70, No. 754, 1.75, No. 755, 1.80, No. 756, 1.85, No. 757, 1.90, No. 758, 1.95, No. 759, 2.00, No. 760, 2.05, No. 761, 2.10, No. 762, 2.15, No. 763, 2.20, No. 764, 2.25, No. 765, 2.30, No. 766, 2.35, No. 767, 2.40, No. 768, 2.45, No. 769, 2.50, No. 770, 2.55, No. 771, 2.60, No. 772, 2.65, No. 773, 2.70, No. 774, 2.75, No. 775, 2.80, No. 776, 2.85, No. 777, 2.90, No. 778, 2.95, No. 779, 3.00, No. 780, 3.05, No. 781, 3.10, No. 782, 3.15, No. 783, 3.20, No. 784, 3.25, No. 785, 3.30, No. 786, 3.35, No. 787, 3.40, No. 788, 3.45, No. 789, 3.50, No. 790, 3.55, No. 791, 3.60, No. 792, 3.65, No. 793, 3.70, No. 794, 3.75, No. 795, 3.80, No. 796, 3.85, No. 797, 3.90, No. 798, 3.95, No. 799, 4.00, No. 800, 4.05, No. 801, 4.10, No. 802, 4.15, No. 803, 4.20, No. 804, 4.25, No. 805, 4.30, No. 806, 4.35, No. 807, 4.40, No. 808, 4.45, No. 809, 4.50, No. 810, 4.55, No. 811, 4.60, No. 812, 4.65, No. 813, 4.70, No. 814, 4.75, No. 815, 4.80, No. 816, 4.85, No. 817, 4.90, No. 818, 4.95, No. 819, 5.00, No. 820, 5.05, No. 821, 5.10, No. 822, 5.15, No. 823, 5.20, No. 824, 5.25, No. 825, 5.30, No. 826, 5.35, No. 827, 5.40, No. 828, 5.45, No. 829, 5.50, No. 830, 5.55, No. 831, 5.60, No. 832, 5.65, No. 833, 5.70, No. 834, 5.75, No. 835, 5.80, No. 836, 5.85, No. 837, 5.90, No. 838, 5.95, No. 839, 6.00, No. 840, 6.05, No. 841, 6.10, No. 842, 6.15, No. 843, 6.20, No. 844, 6.25, No. 845, 6.30, No. 846, 6.35, No. 847, 6.40, No. | |

| | |
|--|-------------------------|
| MOLASSES GATES. | |
| Stebbins Pattern..... | dis 70 & 10 |
| Stebbins Genuine..... | dis 70 & 10 |
| Stebbins Tinned Ends..... | dis 40 & 10 |
| Chase's Hard Metal..... | dis 50 & 10 |
| Self-Measuring (Enterprise)..... | dis 20 |
| Lincoln's Pattern..... | dis 60 & 10 |
| Weed's..... | dis 15 |
| Boss Nos. 1 2 3 4..... | dis 10 |
| Boss, Japanned Finish..... | dis 60 & 10 |
| Boss, Bronze Finish..... | dis 60 & 10 |
| NUTS AND WASHERS. | |
| Square Nuts..... | 8 c off list |
| Hexagon Nuts..... | 8 c off list |
| Washers..... | 7 c off list |
| OILS. | |
| Zinc and Tin..... | dis 60 & 10 |
| Brass and Copper..... | dis 50 |
| Malleable (Hammer)..... | dis 50 |
| PINKING IRONS..... | dis 75c, net |
| PLATING MACHINES. | |
| Astor Plating Machine..... | each \$15, dis 20 |
| Crown Plating Machine..... | dis 25 |
| 6 in., 8 in. & 10 in. each..... | |
| PLANES AND PLANE IRONS. | |
| Bench, First Quality..... | dis 30 |
| Bench, Second Quality..... | dis 25 |
| Molding..... | dis 15 |
| Balley's (Stanley R. & L. Co.) new list, Jan. 1879..... | dis 20 & 10 |
| The Stanley (S. R. & L. Co.) new list, Jan. 1879..... | dis 20 & 10 |
| Balley's..... | dis 20 & 10 |
| Plane Irons, Butcher's..... | dis 30 |
| Plane Irons, Auburn Tool Co..... | dis 20 |
| Plane Irons, Ohio Tool Co..... | dis 20 |
| Plane Irons, Sandusky Tool Co..... | dis 20 |
| PIERS AND NIPPERS. | |
| Button's Patent..... | dis 25 |
| Hall's Pat. Compound Lever Cutting Nippers..... | dis 25 |
| No. 2, 5 in., \$13.50; No. 4, 7 in., \$21..... | dis 25 |
| Gas Pliers..... | dis 50 |
| PLUMBS AND LEVELS. | |
| Diston's..... | dis 40 |
| Stanley R. & L. Co.'s Pat. Adjustable..... | dis 50 & 10 |
| Stanley R. & L. Co.'s Non-Adjustable..... | dis 50 & 10 |
| Chapin's Patent Adjustable..... | dis 50 & 10 |
| Chapin's Non-Adjustable..... | dis 50 & 10 |
| Standard Rule Co.'s New Adjustable..... | dis 50 & 10 |
| Standard Rule Co.'s Non-Adjustable..... | dis 50 & 10 |
| Pocket Levels..... | dis 50 & 10 |
| RAIL. | |
| Sliding Door, Wrought Brass..... | dis 30 |
| Sliding Door, Bronze Wrt. Iron..... | dis 30 |
| Sliding Door, Iron, Painted..... | dis 30 |
| Barn Door..... | dis 30 |
| Per 100 feet..... | \$2.50 3.00 5.00 dis 10 |
| B. D. for N. E. Hangers..... | |
| Small Med. Large..... | \$2.10 2.70 3.00 net |
| RAZORS. | |
| J. R. Torrey Razor Co..... | dis 20 |
| RAZOR STROPS. | |
| Genuine Emerson..... | dis 60 & 65 |
| Badger's Emerson..... | dis 60 & 65 |
| Badger's (not Emerson)..... | dis 35 |
| Imitation Emerson..... | dis 20 |
| Torrey's..... | dis 20 |
| RIVETS. | |
| Iron and Tinned, new list, Dec. 10, 1881..... | dis 45 |
| In bulk, new list, Dec. 10, 1881..... | dis 45 |
| Copper Rivets and Burrs..... | dis 45 |
| Nos. 7 8 9 10 11 12 13 14 15..... | dis 45 |
| No. 7, 40c. 50c. 52c. 54c. 56c. 58c. 60c. 65c. 70c..... | |
| RIVET SETS. | |
| Stair, Brass..... | dis 25 |
| Stair, Black Walnut..... | dis 25 |
| RULES. | |
| Chapin's..... | dis 70 & 10 |
| Standard..... | dis 40 & 10 |
| Stanley..... | dis 40 & 10 |
| Stevens & Co. Miscellaneous..... | dis 50 & 10 |
| Stevens & Co. Miscellaneous..... | dis 50 & 10 |
| SAD IRONS. | |
| Self-Heating, Charcoal..... | dis 20 |
| Mrs. Pott's Irons..... | dis 35 |
| Enterprise Star Irons, new list, July 20, 1882..... | dis 35 |
| Comb'd Fluter and Sad Iron..... | dis 15 |
| Common Sad Irons..... | dis 25 |
| SAND PAPER. | |
| Baeder & Adamson's Flint, 000 1/2 \$4.50 per m..... | |
| Baeder & Adamson's Flint, 2 2/3 \$3.50 per m..... | |
| Baeder & Adamson's Flint, Assorted 4 7/8 per m..... | |
| Baeder & Adamson's Flint, Emery 5 1/2 per m..... | |
| Baeder & Adamson's Flint, Emery 6 1/2 per m..... | |
| J. Bartle's Sand, Flint and Emery Paper..... | dis 30 & 5 |
| SASH CORD. | |
| Common..... | dis 14c, net |
| Patent..... | dis 17c, net |
| Silver Braided Lake Hemp..... | dis 10 |
| Silver Braided Lake White Cotton..... | dis 10 |
| Silver Braided Lake Drab Cotton..... | dis 10 |
| Silver Lake Cable Laid, Bengali unbleached Hemp, 17 cts..... | dis 10 |
| Russian Hemp, 19 cts..... | dis 10 |
| Italian Hemp, 34 cts..... | dis 10 |
| SASH WEIGHTS. | |
| Solid Eyes, in 500-lb. lots and over..... | dis 1 1/2 c, net |
| SAUSAGE STUFFERS OR FILLETS. | |
| Miles..... | dis 25 |
| Perry..... | dis 25 |
| Enterprise Mfg Co..... | dis 25 |
| Monarch..... | dis 40 |
| SAWS. | |
| Boynton's Lightning Cross Cut, new list..... | dis 40 |
| Boynton's Circular and Mill..... | dis 40 |
| Boynton's Ice..... | dis 25 |
| Boynton's Lightning Hand, Panel and Rip..... | dis 25 |
| Diston's Circular..... | dis 40 |
| Diston's Mill..... | dis 40 |
| Diston's Cross Cut..... | dis 40 |
| Diston's Hand, Panel, Rip, &c..... | dis 20 |
| Hubbard, Bakewell & Co. Cir. Saws..... | dis 40 & 5 |
| Hubbard, Bakewell & Co. Cross Cut..... | dis 40 & 5 |
| Hubbard, Bakewell & Co. One-Man's, X Cut..... | dis 40 & 5 |
| Hubbard, Bakewell & Co. Mill Saws..... | dis 40 & 5 |
| Peace Circular and Mill..... | dis 40 |
| Peace Hand, Panel and Rip..... | dis 25 |
| Peace Cross Cut..... | dis 25 |
| Peace Band Saws, all widths..... | dis 10 |
| Webster Cross Cut, with Handles..... | dis 25 & 10 |
| Griffin's Hack Saws and Blades..... | dis 30 |
| SAW FRAMES. | |
| White..... | dis 10 |
| Saw Rods..... | dis 10 |
| SAW SETS. | |
| Stillman's Genuine..... | dis 35 & 50 |
| Stillman's Imitation..... | dis 35 & 50 |
| Common Lever..... | dis 35 & 50 |
| Leach's..... | dis 35 & 50 |
| Hammer, Hotchkiss..... | dis 35 & 50 |
| Aiken's Genuine..... | dis 35 & 50 |
| Aiken's Imitation..... | dis 35 & 50 |
| Diston's..... | dis 35 & 50 |
| Morrill's..... | dis 35 & 50 |
| SCALES. | |
| Hatch, Counter, No. 171..... | dis 35 & 10 |
| Hatch, Tea, No. 161..... | dis 35 & 10 |
| Union Platform, Keystone..... | dis 45 |

| | |
|---|----------------------|
| Chicago Scale Co. | |
| Special dis | |
| Fairbanks..... | dis 30 |
| Forsyth Scale Co..... | dis 30 |
| Howe..... | dis 20 & 10 |
| Chatillon's Grocers..... | dis 40 |
| Chatillon's Eureka..... | dis 25 |
| Family Universal..... | dis 50 |
| Family Favorite..... | dis 30 |
| Family Turnbull's..... | dis 30 |
| Scale Beams, List of Jan. 12, 1882..... | dis 50 |
| SCREW DRIVERS. | |
| Douglas Mfg Co..... | dis 20 & 10 |
| Diston's..... | dis 40 |
| Cowles Mfg Co..... | dis 50 & 10 |
| Stanley Rule & Level Co.'s Var. Halls..... | dis 50 & 10 |
| Stanley Rule & Level Co.'s Blk Halls..... | dis 40 & 10 |
| Hatchet..... | dis 25 |
| Clark's Patent..... | dis 25 |
| Shepardson..... | dis 25 |
| SCREWS. | |
| Flat Head Iron, list Dec. 27, 1881..... | dis 70 |
| Round Head Iron..... | dis 50 |
| Flat Head Brass..... | dis 15 |
| Round Head Brass..... | dis 15 |
| Flat Head Blue add 2 1/2 % to net of invoice..... | |
| Brass and Silver Capped..... | dis 40 |
| Japanned, list of Plain Screws..... | dis 20 |
| Coach, Patent Gimlet Point..... | dis 10 |
| Coach, Common or Lag..... | dis 10 |
| Bed..... | dis 10 |
| Machine, Flat Head, Iron..... | dis 50 |
| Machine, Round Head, Iron..... | dis 50 |
| Bench, Wood, Beech..... | dis 30 |
| Bench, Wood, Hickory..... | dis 30 |
| Hand, Wood..... | dis 30 |
| Hand Rail, Sargent's..... | dis 60 & 10 |
| Hand Rail, Humason, Beckley & Co.'s..... | dis 40 & 10 |
| Hand Rail, Am. Screw Co., list Jan. 1, 1881..... | dis 70 |
| Jack (Wilson's)..... | dis 25 |
| SCREEN FRAMES AND FIXTURES. | |
| Standard Window Screens No. 1..... | dis 25 |
| Door..... | dis 40 & 10 |
| Window Corner Irons, No. 3, doz. 5 ts, \$2..... | |
| Door..... | dis 40 & 10 |
| Door Latches, 1/2 dozen, \$3.00; dis 50..... | |
| Porter's Patent Window and Door Screen Frames..... | |
| PER DOZ. SETS. | |
| In Im. Blk..... | |
| White, Walnut..... | |
| No. 20..... | \$2.75 |
| No. 21..... | \$2.25 |
| No. 22..... | \$5.50 |
| No. 23..... | \$6.00 |
| No. 30..... | \$10.00 |
| Porter's Corners..... | |
| No. 0. Corners and Sticks complete for a three-foot window, 1/2 doz. sets, \$4..... | |
| No. 1. Set for Window, 1/2 doz. sets, \$4..... | |
| No. 1 1/2. " " 1/2 doz. sets, \$4..... | |
| No. 4. " " 1/2 doz. sets, \$4..... | |
| No. 4. " " or Door, 1/2 doz. sets, \$4..... | |
| No. 4. " " or Door, 1/2 doz. sets, \$4..... | |
| No. 4. " " or Door, 1/2 doz. sets, \$4..... | |
| No. 2 1/2. " " 1/2 doz. sets, \$4..... | |
| No. 3. " " 1/2 doz. sets, \$4..... | |
| SHEARS AND SCISSORS. | |
| American (Cast) Iron..... | dis 70 & 10 |
| Pruning..... | dis 15 |
| Pruning..... | dis 15 |
| Barnard's Lamp Trimmers..... | dis 15 |
| Timmers..... | dis 15 |
| Norfolk Shear Co..... | dis 15 |
| Jersey shears..... | dis 80 |
| J. Wiss & Son, Nickel, 50 & 55; Japanned, 60 & 65..... | |
| SHUTTER HINGES. | |
| Clark's Improved Shutter Hinge, Nos. 0, 1, 1 1/2, 2, 2 1/2, 3..... | dis 75 |
| Iron and Brass Head, R. & E. List..... | dis 60 & 10 |
| Polished Steel, New List..... | dis 50 & 10 |
| SLEIGH BELLS. | |
| Arctic and Polar..... | dis 30 |
| Loose and neck and body strap..... | dis 50 |
| SPOKE TRIMMERS. | |
| Bonney's..... | dis 10 |
| Stearns'..... | dis 10 |
| Ives'..... | dis 10 |
| Douglas'..... | dis 15 |
| SILVER-PLATED WARE. | |
| Wm. Rogers Mfg. Co..... | dis 50, 10, 5 & 5 |
| Holmes, Booth & Hayden..... | dis 40 & 10 |
| Brown Bros..... | dis 40 & 10 |
| Wallace's Steel Silver Plated..... | dis 35 & 10 |
| Rogers Bros 1847..... | dis 40 |
| C. Rogers & Bro..... | dis 40 & 10 |
| SILVER-PLATED HOLLOW WARE. | |
| Wm. Rogers Mfg. Co..... | dis 40, 15 & 5 |
| Meriden Britannia Co..... | dis 35 |
| SPOONS. | |
| Britannia..... | dis 60 & 10 |
| Tinned, Iron, Table and Tea..... | dis 65 |
| Tinned Iron Basting..... | dis 65 |
| German Silver..... | dis 40, 12, 1, 2 & 5 |
| STONE. | |
| Hindustan No. 1, 5c; Axe, 8c..... | dis 35 |
| Sand Stone..... | dis 35 |
| Washita Stone..... | dis 15 |
| Washita Stone, Slips..... | dis 15 |
| Arkansas..... | dis 15 |
| SQUARES. | |
| Steel..... | dis 50 |
| Iron..... | dis 50 |
| Nickel Plated..... | dis 50 |
| Try Square and T Bevels..... | dis 50 & 10 |
| Diston's Try Square and T Bevels..... | dis 40 |
| VISES. | |
| Solid Box—Wilson's..... | dis 50 |
| Trenton..... | dis 45 |
| Iron City Tool Works..... | dis 50 |
| Bench—Wilson's..... | dis 45 |
| Trenton..... | dis 25 |
| Parker's..... | dis 20 |
| Prentiss..... | dis 25 |
| Bonney's..... | dis 35 |
| Well Wheels..... | dis 60 & 10 |

Randolph Brandt,
38 Cortlandt St., New York,
Manufacturer of the
SELDEN PATENT PACKING



FOR
ENGINES and PUMPS.

This packing is used by the largest Engine and Pump Builders, as well as in Mines, Mills and Steamship Lines, and is kept in stock by Supply Houses throughout the country. There are two styles of this packing, the "Plain" and the "Rubber Core." ENGINEERS will be satisfied of its superiority after once using; and DEALERS will find it a *salable* article. In ordering please specify which is desired. Asbestos Wick for Globe Valve Stems. Square Hemp and Flax Packing. Attention paid to purchasing General Supplies for Mines, Mills etc., etc.

FISHERMEN!
Twine and Netting
MANUFACTURED BY THE
BALTIMORE TWINE AND NET CO.
W. J. HOOPER & SON,
No. 6 S. Calvert St., BALTIMORE, MD.
Send for price list, naming county and State. Please mention this paper.

THE WM. ROGERS MFG. CO.
MANUFACTURERS OF
Silver-Plated Table Ware.
TRADE-MARKS:
WM. ROGERS & SON,
—AND—
1865—WM. ROGERS MFG CO.
All Goods Guaranteed.
P. O. Drawer 30, HARTFORD, CONN.



Non-Mechanical, No-Chimney LAMPS!

The McLewee Patent.

Burns **WITHOUT** a Chimney.

NO MACHINERY TO GET OUT OF ORDER.

Absolutely Odorless and Non-Explosive!

Give a larger and brighter flame than can be obtained with a chimney. The combustion is perfect, and they are therefore free from the slightest odor. The globes having large openings at both top and bottom are never broken by the heat. Are superior to all mechanical lamps, in that they require no winding up and have no complicated machinery to get out of order. They are made with both *Single* and *Duplex* Burners.

We have had the light given by the Duplex measured by the U. S. Government Lighthouse Department, and it gives 50 per cent. more light than either the *Mechanical* or *Student* Lamps.

It is unquestionably the Best and Safest Lamp ever made.

PRICES:

| | |
|---|--------------|
| Stand Lamp, (Nickel Plated,) Single Burner, | |
| Complete, - - - - - | \$4. |
| Duplex, made in two sizes, - - - | \$5 and \$6. |
| Hanging Lamps from - - - - - | \$3 to \$12. |

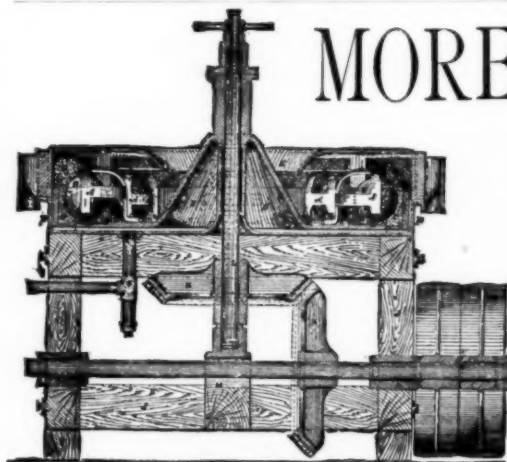
— Discounts to the Trade. —

HEKTOGRAPH + MANUFACTURING + CO.

22 and 24 Church St., New York.

Send for Illustrated Circulars.

Sole Manufacturers.



FOR WET OR DRY PULVERIZING.

MOREY IMPROVED PULVERIZER.

FOR CRUSHING

Ores, Phosphate Rock, Cement, Barytes, &c.

THE BALLS WORK HORIZONTALLY INSTEAD OF PERPENDICULARLY,
Giving Full Power of Centrifugal Force in the Simplest Manner Possible.

SIMPLE, EFFICIENT, DURABLE and LIGHT. WITHOUT FRICTION.

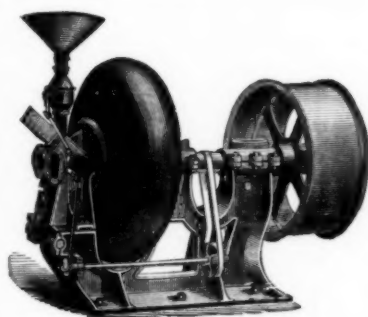
Requires Little Power.

Rock Breakers, Stamp Mills, Ore Cars, Ore Buckets, Concentrated and Amalgamating Machinery, Engines and Boilers, Hoisting and Pumping Machinery. SEND FOR CIRCULARS.

The Morey & Sperry Mining Machinery Co., Manufacturers,

SUCCESSORS TO MOREY & SPERRY.

92 and 94 LIBERTY STREET, NEW YORK CITY.



CONTINENTAL WORKS, Brooklyn, N. Y.

— DUC'S —
MECHANICAL **ATOMIZER** — OR —
PULVERIZER,

For reducing to an impalpable powder all kinds of hard and brittle substances, such as Quartz, Emery, Corundum, Gold and Silver Ores, Barytes, Coal, Ochre, Manganese, Iron Ores, PHOSPHATE ROCK, &c.

It is simple and not liable to get out of order. Revolving Shell being constructed of Siemens-Martin Steel, and all parts mechanical in design and of first-class construction. Weight, 5,500 lbs.; heaviest piece, 1,500 lbs. It will pulverize 7 to 10 TONS IN 10 HOURS with 30 H. P.

For Circulars and full particulars, apply to or address

THOS. F. ROWLAND, Sole Manufacturer,

BROOKLYN, N. Y.

**GREAT SOUTHERN DESPATCH
FAST FREIGHT LINE BETWEEN
BALTIMORE AND THE SOUTH AND SOUTHWEST,
Via Western Maryland Railroad.**

For Rates and other information apply to or address:

B. H. Griswold, A. Pope, Gen. E. Agt., D. K. Houck, Sol. Agt., J. H. Geigan & Co., Agts., D. H. Knipple,
S.P.A., W.M.E.R., Balto. Roanoke, Va. 133 W. Baltimore St. 133 W. Baltimore St. Agt., Hillen St.

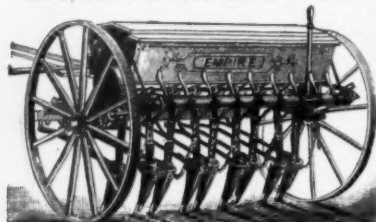
Great Reduction in Prices of
METALLIC SHINGLES.

New and improved designs \$5.50 and \$6.50 per square.

ANGLO-AMERICAN ROOFING CO.

22 Cliff Street, NEW YORK.

EMPIRE DRILL.



With Force-Feed Fertilizer Attachment.

Any brand of commercial manure sown with accuracy. **NO GUESS WORK.** Over 8,000 in use, giving unbounded satisfaction.

Sheldon Self-Dump RAKES and Excelsior Horse-Poke.

All three implements first-class in every respect. Address inquiries to

EMPIRE DRILL CO., 10 Swan St., Baltimore.

ENGINES, BOILERS, &c. For Sale Low.

- 1 Porter Horizontal Engine, 50-H. P. New
 - 1 " " " 18-H. P. "
 - 1 " " " 35-H. P. "
 - 1 " " " 4-H. P. "
 - 1 Birdsall Traction Engine, 10-H. P.
 - 1 " " " 10-H. P. "
 - 1 " " " 8-H. P. "
 - 1 " " Semi-Portable Engine, 8-H. P. New.
 - 1 Wood, Tabor & Moore, 8-H. P. Second hand.
 - 1 Curley Saw Mill, No. 2. New.
 - 1 Novelty Saw Mill. New.
- Also Engines, both Portable and Stationary, any size, or any size or description of Boilers. The Gardner 3-Cylinder Engines. Snyder's Little Giant Engines and Boilers. Low Prices guaranteed. Send for Estimates, stating size wanted and purpose to be used for, to

WM. R. EMERSON,
6 and 8 North Liberty St.,
BALTIMORE.



THE PERFECT Towel Holder

is selling very fast in the East, and is meeting with well-merited success. This little article should be in every place where a towel is used, as it saves towels and at the same time saves trouble. We will send a sample with prices for 15 cts., or a sample dozen for \$1.00.

**Haff & Co., Box 24,
HARTFORD, CONN**

THE SOMBART Gas Engine

PATENT
Started Instantly. No Fire to Build. No Boiler to Watch. No Engineer Required. No Coal nor Ashes. No Water Needed.
NO DANGER OF EXPLOSION!
Four Sizes, $\frac{1}{2}$, $\frac{3}{4}$, 1 and 1-horse-power, (Actual.)
When stopped all expense ceases. The most convenient and cheapest Motor for small power ever made. Just the thing for Printing Offices, Laundry, Jewellers, Saddlery, Coffee Mills, Small Shops, etc.
Sombart Gas Engine Co., HARTFORD, CONN.
For sale by Jackson & Tyler, 16 S. Howard St., Baltimore.



SCALES,
Anvils, Vises, Portable Forges, Blacksmith's Tools, Hardware Specialties.
Send for Price-List.
Chicago Scale Co., CHICAGO.

STANCH AND RELIABLE

COLUMBIA BICYCLES

FOR ROAD TRICYCLES

THE POPULAR STEEDS FOR BUSINESS & PLEASURE

THE POPE MFG. CO
597 Washington St. Boston, Mass.

"If I could not get another bicycle I would not give mine for its weight in solid gold. For fifteen years I lost from three to eight days every month with various sick headaches. Since I have been riding the bicycle I have lost only two days from that cause, and I know'st spent a dollar for a doctor."

Rev. GEO. F. FENYECOR.

FINEST MATERIALS. SKILLFUL WORKMANSHIP

The Manhattan

FOR MARCH

CONTAINS:

Frontispiece. The Vase. From a painting by Mariano Fortuny. Engraved by Frank French.

Dartmouth College. By B. B. Valentine. Profusely illustrated from sketches made for the article, and photographs.

Transformation. A Story. Concluded. By Harriet Prescott Spofford.

A Farmer's Nor-ow. A Poem. By Sarah Orne Jewett.

Our Forests and Tree Lore. By Laura C. Holloway.

What Came of a Kilt of Mackerel. A Story. By J. H. Walworth.

A Walk in Winter. By Charles C. Abbott.

Raffling on the Alleghany. By William Willard Howard. Profusely illustrated.

What Will Become of Egypt? By Gen. W. W. Loring, Pasha.

The Myth of Pinocchio's Cave. By Cope Whitehouse. Illustrated.

Tinkling Cymbals. A Story. Continued. By Edgar Fawcett.

Creation or Evolution? By George Ticknor Curtis.

Poems by Gideon J. Tucker, James B. Kenyon and others.

Recent Literature. Town Talk. Salemundi.

\$3.00 a year, postage paid. 25 cts. a number.

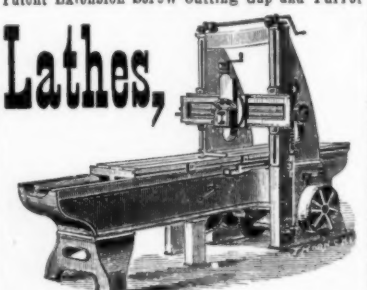
THE MANHATTAN MAGAZINE CO.,
Temple Court, New York City.

HOISTING ENGINES

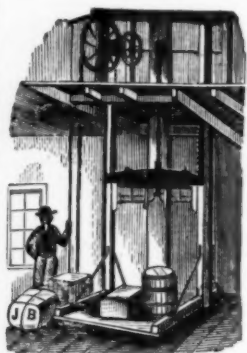
Of any Power, Double and Single, with Improved Patent Friction Drums. Especially adapted for Bridge Building, Dock Building, Pile Driving, Coal Hoisting, Quarries, Mines, etc.

STAMP MILLS OF ANY SIZE FOR MINES.
J. S. MUNDY
22 & 24 Prospect St.
Newark, N. J.

Established 1867.
E. HARRINGTON, SON & CO.
MANUFACTURERS OF
Patent Extension Screw-Cutting Gap and Turret



Iron Planers, Boring Mills, Radial, Upright, Suspension Multiple, Level, Carriage Makers, Blacksmiths' Hand and Power Post DRILLS, and a variety of other Machinists' Tools. PATENT DOUBLE CHAIN SCREW PULLEY BLOCKS, unrivaled for durability, safety and power. PATENT DOUBLE CHAIN QUICK-LIFT HOISTS, with brake for quick and easy lowering. Circulars furnished.
Works and Office, North 10th St. and Penn Avenue, PHILADELPHIA, PA.



Bates' Hand Elevators.
Patented April 18, 1871. Released July 25, 1876.
OVER 6,000 IN USE.

Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, etc., is transferred from one story to another.

JAMES BATES, Patentee.

Nos. 1, 3 & 5 President Street, BALTIMORE.

THE BRADSTREET MERCANTILE AGENCY

HAS NOW BEEN
Under its present successful management for the past seven years,
And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and, if in need of an Agency, to test its ability to serve you.

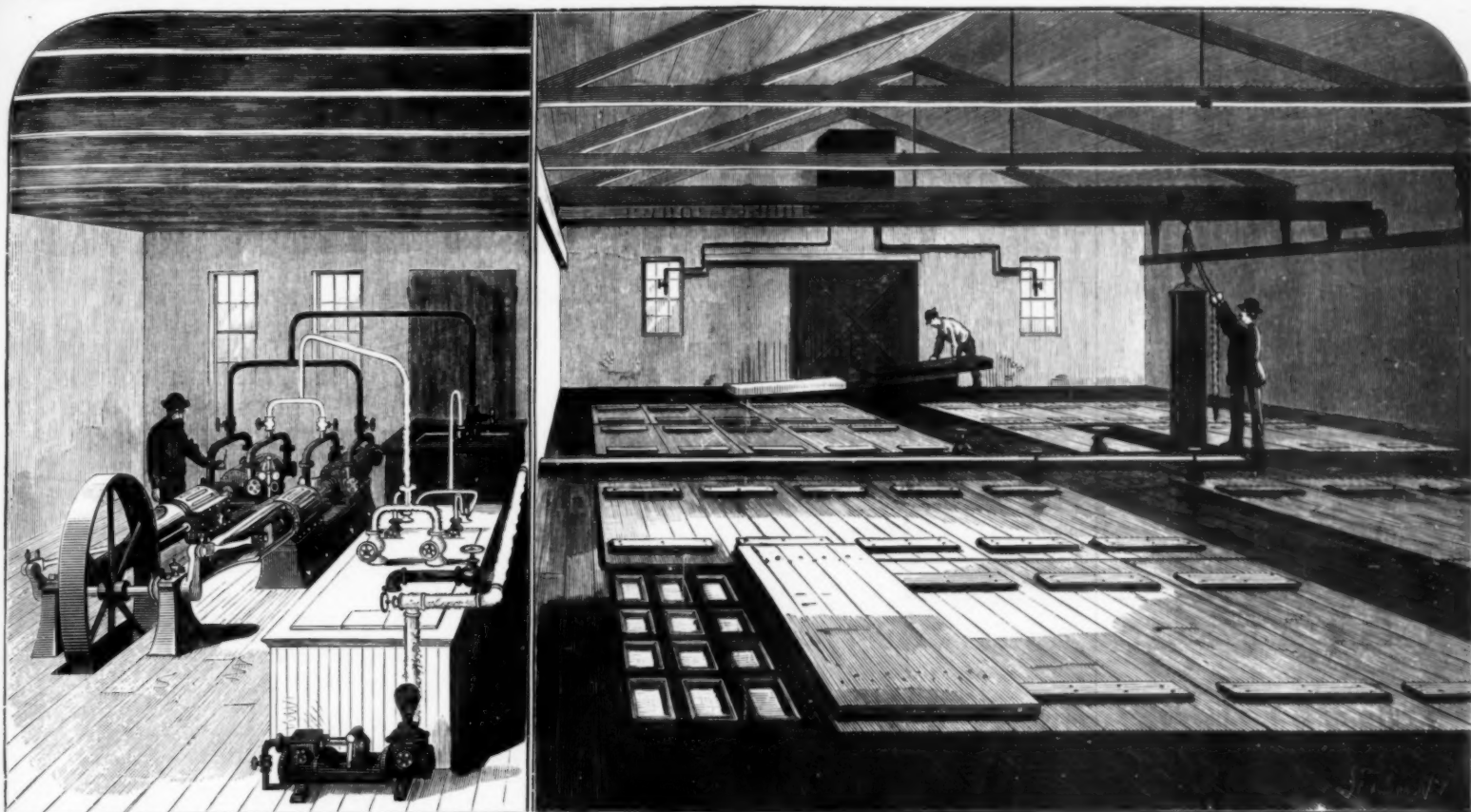
CHAS. F. CLARK, President.

Baltimore Office,—American Building,
H. KERSHAW, Supt.

New and Second-Hand Machinery

NEW.

- 1 Engine Lathe, 10 in. x 3 1/2 ft.
- 1 each Engine Lathes, 11 in. x 4 and 5 ft.
- 1 " " " 13 in. x 5, 6 and 8 ft.
- 1 Engine Lathe, 14 in. x 5, 6 and 8 ft.
- 1 " " " 16 in. x 6 ft.
- 1 each Engine Lathes, 16 in. x 6, 7, 8 and 10 ft.
- 1 Engine Lathe, 18 in. x 6, 8, 10 and 12 ft.
- 1 " " " 20 in. x 8, 10, 12, 14 and 16 ft.
- 1 " " " 22 in. x 8, 10, 12, 14 and 16 ft.
- 1 " " " 24 in., any length of bed to 26 ft.
- 1 " " " 26 in. " " " 26 ft.
- 1 " " " 28 in. " " " 26 ft.
- 1 " " " 30 in. " " " 28 ft.
- 1 " " " 32 in. " " " 28 ft.
- 1 " " " 34 in. " " " 28 ft.
- 1 " " " 36 in. " " " 28 ft.
- 1 " " " 38 in. " " " 28 ft.
- 1 " " " 40 in. " " " 28 ft.
- 1 " " " 42 in. " " " 28 ft.
- 1 " " " 44 in. " " " 28 ft.
- 1 " " " 46 in. " " " 28 ft.
- 1 " " " 48 in. " " " 28 ft.
- 1 " " " 50 in. " " " 28 ft.
- 1 " " " 52 in. " " " 28 ft.
- 1 " " " 54 in. " " " 28 ft.
- 1 " " " 56 in. " " " 28 ft.
- 1 " " " 58 in. " " " 28 ft.
- 1 " " " 60 in. " " " 28 ft.
- 1 " " " 62 in. " " " 28 ft.
- 1 " " " 64 in. " " " 28 ft.
- 1 " " " 66 in. " " " 28 ft.
- 1 " " " 68 in. " " " 28 ft.
- 1 " " " 70 in. " " " 28 ft.
- 1 " " " 72 in. " " " 28 ft.
- 1 " " " 74 in. " " " 28 ft.
- 1 " " " 76 in. " " " 28 ft.
- 1 " " " 78 in. " " " 28 ft.
- 1 " " " 80 in. " " " 28 ft.
- 1 " " " 82 in. " " " 28 ft.
- 1 " " " 84 in. " " " 28 ft.
- 1 " " " 86 in. " " " 28 ft.
- 1 " " " 88 in. " " " 28 ft.
- 1 " " " 90 in. " " " 28 ft.
- 1 " " " 92 in. " " " 28 ft.
- 1 " " " 94 in. " " " 28 ft.
- 1 " " " 96 in. " " " 28 ft.
- 1 " " " 98 in. " " " 28 ft.
- 1 " " " 100 in. " " " 28 ft.
- 1 " " " 102 in. " " " 28 ft.
- 1 " " " 104 in. " " " 28 ft.
- 1 " " " 106 in. " " " 28 ft.
- 1 " " " 108 in. " " " 28 ft.
- 1 " " " 110 in. " " " 28 ft.
- 1 " " " 112 in. " " " 28 ft.
- 1 " " " 114 in. " " " 28 ft.
- 1 " " " 116 in. " " " 28 ft.
- 1 " " " 118 in. " " " 28 ft.
- 1 " " " 120 in. " " " 28 ft.
- 1 " " " 122 in. " " " 28 ft.
- 1 " " " 124 in. " " " 28 ft.
- 1 " " " 126 in. " " " 28 ft.
- 1 " " " 128 in. " " " 28 ft.
- 1 " " " 130 in. " " " 28 ft.
- 1 " " " 132 in. " " " 28 ft.
- 1 " " " 134 in. " " " 28 ft.
- 1 " " " 136 in. " " " 28 ft.
- 1 " " " 138 in. " " " 28 ft.
- 1 " " " 140 in. " " " 28 ft.
- 1 " " " 142 in. " " " 28 ft.
- 1 " " " 144 in. " " " 28 ft.
- 1 " " " 146 in. " " " 28 ft.
- 1 " " " 148 in. " " " 28 ft.
- 1 " " " 150 in. " " " 28 ft.
- 1 " " " 152 in. " " " 28 ft.
- 1 " " " 154 in. " " " 28 ft.
- 1 " " " 156 in. " " " 28 ft.
- 1 " " " 158 in. " " " 28 ft.
- 1 " " " 160 in. " " " 28 ft.
- 1 " " " 162 in. " " " 28 ft.
- 1 " " " 164 in. " " " 28 ft.
- 1 " " " 166 in. " " " 28 ft.
- 1 " " " 168 in. " " " 28 ft.
- 1 " " " 170 in. " " " 28 ft.
- 1 " " " 172 in. " " " 28 ft.
- 1 " " " 174 in. " " " 28 ft.
- 1 " " " 176 in. " " " 28 ft.
- 1 " " " 178 in. " " " 28 ft.
- 1 " " " 180 in. " " " 28 ft.
- 1 " " " 182 in. " " " 28 ft.
- 1 " " " 184 in. " " " 28 ft.
- 1 " " " 186 in. " " " 28 ft.
- 1 " " " 188 in. " " " 28 ft.
- 1 " " " 190 in. " " " 28 ft.
- 1 " " " 192 in. " " " 28 ft.
- 1 " " " 194 in. " " " 28 ft.
- 1 " " " 196 in. " " " 28 ft.
- 1 " " " 198 in. " " " 28 ft.
- 1 " " " 200 in. " " " 28 ft.
- 1 " " " 202 in. " " " 28 ft.
- 1 " " " 204 in. " " " 28 ft.
- 1 " " " 206 in. " " " 28 ft.
- 1 " " " 208 in. " " " 28 ft.
- 1 " " " 210 in. " " " 28 ft.
- 1 " " " 212 in. " " " 28 ft.
- 1 " " " 214 in. " " " 28 ft.
- 1 " " " 216 in. " " " 28 ft.
- 1 " " " 218 in. " " " 28 ft.
- 1 " " " 220 in. " " " 28 ft.
- 1 " " " 222 in. " " " 28 ft.
- 1 " " " 224 in. " " " 28 ft.
- 1 " " " 226 in. " " " 28 ft.
- 1 " " " 228 in. " " " 28 ft.
- 1 " " " 230 in. " " " 28 ft.
- 1 " " " 232 in. " " " 28 ft.
- 1 " " " 234 in. " " " 28 ft.
- 1 " " " 236 in. " " " 28 ft.
- 1 " " " 238 in. " " " 28 ft.
- 1 " " " 240 in. " " " 28 ft.
- 1 " " " 242 in. " " " 28 ft.
- 1 " " " 244 in. " " " 28 ft.
- 1 " " " 246 in. " " " 28 ft.
- 1 " " " 248 in. " " " 28 ft.
- 1 " " " 250 in. " " " 28 ft.
- 1 " " " 252 in. " " " 28 ft.
- 1 " " " 254 in. " " " 28 ft.
- 1 " " " 256 in. " " " 28 ft.
- 1 " " " 258 in. " " " 28 ft.
- 1 " " " 260 in. " " " 28 ft.
- 1 " " " 262 in. " " " 28 ft.
- 1 " " " 264 in. " " " 28 ft.
- 1 " " " 266 in. " " " 28 ft.
- 1 " " " 268 in. " " " 28 ft.
- 1 " " " 270 in. " " " 28 ft.
- 1 " " " 272 in. " " " 28 ft.
- 1 " " " 274 in. " " " 28 ft.
- 1 " " " 276 in. " " " 28 ft.
- 1 " " " 278 in. " " " 28 ft.
- 1 " " " 280 in. " " " 28 ft.
- 1 " " " 282 in. " " " 28 ft.
- 1 " " " 284 in. " " " 28 ft.
- 1 " " " 286 in. " " " 28 ft.
- 1 " " " 288 in. " " " 28 ft.
- 1 " " " 290 in. " " " 28 ft.
- 1 " " " 292 in. " " " 28 ft.
- 1 " " " 294 in. " " " 28 ft.
- 1 " " " 296 in. " " " 28 ft.
- 1 " " " 298 in. " " " 28 ft.
- 1 " " " 300 in. " " " 28 ft.
- 1 " " " 302 in. " " " 28 ft.
- 1 " " " 304 in. " " " 28 ft.
- 1 " " " 306 in. " " " 28 ft.
- 1 " " " 308 in. " " " 28 ft.
- 1 " " " 310 in. " " " 28 ft.
- 1 " " " 312 in. " " " 28 ft.
- 1 " " " 314 in. " " " 28 ft.
- 1 " " " 316 in. " " " 28 ft.
- 1 " " " 318 in. " " " 28 ft.
- 1 " " " 320 in. " " " 28 ft.
- 1 " " " 322 in. " " " 28 ft.
- 1 " " " 324 in. " " " 28 ft.
- 1 " " " 326 in. " " " 28 ft.
- 1 " " " 328 in. " " " 28 ft.
- 1 " " " 330 in. " " " 28 ft.
- 1 " " " 332 in. " " " 28 ft.
- 1 " " " 334 in. " " " 28 ft.
- 1 " " " 336 in. " " " 28 ft.
- 1 " " " 338 in. " " " 28 ft.
- 1 " " " 340 in. " " " 28 ft.
- 1 " " " 342 in. " " " 28 ft.
- 1 " " " 344 in. " " " 28 ft.
- 1 " " " 346 in. " " " 28 ft.
- 1 " " " 348 in. " " " 28 ft.
- 1 " " " 350 in. " " " 28 ft.
- 1 " " " 352 in. " " " 28 ft.
- 1 " " " 354 in. " " " 28 ft.
- 1 " " " 356 in. " " " 28 ft.
- 1 " " " 358 in. " " " 28 ft.
- 1 " " " 360 in. " " " 28 ft.
- 1 " " " 362 in. " " " 28 ft.
- 1 " " " 364 in. " " " 28 ft.
- 1 " " " 366 in. " " " 28 ft.
- 1 " " " 368 in. " " " 28 ft.
- 1 " " " 370 in. " " " 28 ft.
- 1 " " " 372 in. " " " 28 ft.
- 1 " " " 374 in. " " " 28 ft.
- 1 " " " 376 in. " " " 28 ft.
- 1 " " " 378 in. " " " 28 ft.
- 1 " " " 380 in. " " " 28 ft.
- 1 " " " 382 in. " " " 28 ft.
- 1 " " " 384 in. " " " 28 ft.
- 1 " " " 386 in. " " " 28 ft.
- 1 " " " 388 in. " " " 28 ft.
- 1 " " " 390 in. " " " 28 ft.
- 1 " " " 392 in. " " " 28 ft.
- 1 " " " 394 in. " " " 28 ft.
- 1 " " " 396 in. " " " 28 ft.
- 1 " " " 398 in. " " " 28 ft.
- 1 " " " 400 in. " " " 28 ft.
- 1 " " " 402 in. " " " 28 ft.
- 1 " " " 404 in. " " " 28 ft.
- 1 " " " 406 in. " " " 28 ft.
- 1 " " " 408 in. " " " 28 ft.
- 1 " " " 410 in. " " " 28 ft.
- 1 " " " 412 in. " " " 28 ft.
- 1 " " " 414 in. " " " 28 ft.
- 1 " " " 416 in. " " " 28 ft.
- 1 " " " 418 in. " " " 28 ft.
- 1 " " " 420 in. " " " 28 ft.
- 1 " " " 422 in. " " " 28 ft.
- 1 " " " 424 in. " " " 28 ft.
- 1 " " " 426 in. " " " 28 ft.
- 1 " " " 428 in. " " " 28 ft.
- 1 " " " 430 in. " " " 28 ft.
- 1 " " " 432 in. " " " 28 ft.
- 1 " " " 434 in. " " " 28 ft.
- 1 " " " 436 in. " " " 28 ft.
- 1 " " " 438 in. " " " 28 ft.
- 1 " " " 440 in. " " " 28 ft.
- 1 " " " 442 in. " " " 28 ft.
- 1 " " " 444 in. " " " 28 ft.
- 1 " " " 446 in. " " " 28 ft.
- 1 " " " 448 in. " " " 28 ft.
- 1 " " " 450 in. " " " 28 ft.
- 1 " " " 452 in. " " " 28 ft.
- 1 " " " 454 in. " " " 28 ft.
- 1 " " " 456 in. " " " 28 ft.
- 1 " " " 458 in. " " " 28 ft.
- 1 " " " 460 in. " " " 28 ft.
- 1 " " " 462 in. " " " 28 ft.
- 1 " " " 464 in. " " " 28 ft.
- 1 " " " 466 in. " " " 28 ft.
- 1 " " " 468 in. " " " 28 ft.
- 1 " " " 470 in. " " " 28 ft.
- 1 " " " 472 in. " " " 28 ft.
- 1 " " " 474 in. " " " 28 ft.
- 1 " " " 476 in. " " " 28 ft.
- 1 " " " 478 in. " " " 28 ft.
- 1 " " " 480 in. " " " 28 ft.
- 1 " " " 482 in. " " " 28 ft.
- 1 " " " 484 in. " " " 28 ft.
- 1 " " " 486 in. " " " 28 ft.
- 1 " " " 488 in. " " " 28 ft.
- 1 " " " 490 in. " " " 28 ft.
- 1 " " " 492 in. " " " 28 ft.
- 1 " " " 494 in. " " " 28 ft.
- 1 " " " 496 in. " " " 28 ft.
- 1 " " " 498 in. " " " 28 ft.
- 1 " " " 500 in. " " " 28 ft.
- 1 " " " 502 in. " " " 28 ft.
- 1 " " " 504 in. " " " 28 ft.
- 1 " " " 506 in. " " " 28 ft.
- 1 " " " 508 in. " " " 28 ft.
- 1 " " " 510 in. " " " 28 ft.
- 1 " " " 512 in. " " " 28 ft.
- 1 " " " 514 in. " " " 28 ft.
- 1 " " " 516 in. " " " 28 ft.
- 1 " " " 518 in. " " " 28 ft.
- 1 " " " 520 in. " " " 28 ft.
- 1 " " " 522 in. " " " 28 ft.
- 1 " " " 524 in. " " " 28 ft.
- 1 " " " 526 in. " " " 28 ft.
- 1 " " " 528 in. " " " 28 ft.
- 1 " " " 530 in. " " " 28 ft.
- 1 " " " 532 in. " " " 28 ft.
- 1 " " " 534 in. " " " 28 ft.
- 1 " " " 536 in. " " " 28 ft.
- 1 " " " 538 in. " " " 28 ft.
- 1 " " " 540 in. " " " 28 ft.
- 1 " " " 542 in. " " " 28 ft.
- 1 " " " 544 in. " " " 28 ft.
- 1 " " " 546 in. " " " 28 ft.
- 1 " " " 548 in. " " " 28 ft.
- 1 " " " 550 in. " " " 28 ft.
- 1 " " " 552 in. " " " 28 ft.
- 1 " " " 554 in. " " " 28 ft.
- 1 " " " 556 in. " " " 28 ft.
- 1 " " " 558 in. " " " 28 ft.
- 1 " " " 560 in. " " " 28 ft.
- 1 " " " 562 in. " " " 28 ft.
- 1 " " " 564 in. " " " 28 ft.
- 1 " " " 566 in. " " " 28 ft.
- 1 " " " 568 in. " " " 28 ft.
- 1 " " " 570 in. " " " 28 ft.
- 1 " " " 572 in. " " " 28 ft.
- 1 " " " 574 in. " " " 28 ft.
- 1 " " " 576 in. " " " 28 ft.
- 1 " " " 578 in. " " " 28 ft.
- 1 " " " 580 in. " " " 28 ft.
- 1 " " " 582 in. " " " 28 ft.
- 1 " " " 584 in. " " " 28 ft.
- 1 " " " 586 in. " " " 28 ft.
- 1 " " " 588 in. " " " 28 ft.
- 1 " " " 590 in. " " " 28 ft.
- 1 " " " 592 in. " " " 28 ft.
- 1 " " " 594 in. " " " 28 ft.
- 1 " " " 596 in. " " " 28 ft.
- 1 " " " 598 in. " " " 28 ft.
- 1 " " " 600 in. " " " 28 ft.
- 1 " " " 602 in. " " " 28 ft.
- 1 " " " 604 in. " " " 28 ft.
- 1 " " " 606 in. " " " 28 ft.
- 1 " " " 608 in. " " " 28 ft.
- 1 " " " 610 in. " " " 28 ft.
- 1 " " " 612 in. " " " 28 ft.
- 1 " " " 614 in. " " " 28 ft.
- 1 " " " 616 in. " " " 28 ft.
- 1 " " " 618 in. " " " 28 ft.
- 1 " " " 620 in. " " " 28 ft.
- 1 " " " 622 in. " " " 28 ft.
- 1 " " " 624 in. " " " 28 ft.
- 1 " " " 626 in. " " " 28 ft.
- 1 " " " 628 in. " " " 28 ft.
- 1 " " " 630 in. " " " 28 ft.
- 1 " " " 632 in. " " " 28 ft.
- 1 " " " 634 in. " " " 28 ft.
- 1 " " " 636 in. " " " 28 ft.
- 1 " " " 638 in. " " " 28 ft.
- 1 " " " 640 in. " " " 28 ft.
- 1 " " " 642 in. " " " 28 ft.
- 1 " " " 644 in. " " " 28 ft.
- 1 " " " 646 in. " " " 28 ft.
- 1 " " " 648 in. " " " 28 ft.
- 1 " " " 650 in. " " " 28 ft.
- 1 " " " 652 in. " " " 28 ft.
- 1 " " " 654 in. " " " 28 ft.
- 1 " " " 656 in. " " " 28 ft.
- 1 " " " 658 in. " " " 28 ft.
- 1 " " " 660 in. " " " 28 ft.
- 1 " " " 662 in. " " " 28 ft.
- 1 " " " 664 in. " " " 28 ft.
- 1 " " " 666 in. " " " 28 ft.
- 1 " " " 668 in. " " " 28 ft.
- 1 " " " 670 in. " " " 28 ft.
- 1 " " " 672 in. " " " 28 ft.
- 1 " " " 674 in. " " " 28 ft.
- 1 " " " 676 in. " " " 28 ft.
- 1 " " " 678 in. " " " 28 ft.
- 1 " " " 680 in. " " " 28 ft.
- 1 " " " 682 in. " " " 28 ft.
- 1 " " " 684 in. " " " 28 ft.
- 1 " " " 686 in. " " " 28 ft.
- 1 " " " 688 in. " " " 28 ft.
- 1 " " " 690 in. " " " 28 ft.
- 1 " " " 692 in. " " " 28 ft.
- 1 " " " 694 in. " " " 28 ft.
- 1 " " " 696 in. " " " 28 ft.
- 1 " " " 698 in. " " " 28 ft.
- 1 " " " 700 in. " " " 28 ft.
- 1 " " " 702 in. " " " 28 ft.
- 1 " " " 704 in. " " " 28 ft.
- 1 " " " 706 in. " " " 28 ft.
- 1 " " " 708 in. " " " 28 ft.
- 1 " " " 710 in. " " " 28 ft.
- 1 " " " 712 in. " " " 28 ft.
- 1 " " " 714 in. " " " 28 ft.
- 1 " " " 716 in. " " " 28 ft.
- 1 " " " 718 in. " " " 28 ft.
- 1 " " " 720 in. " " " 28 ft.
- 1 " " " 722 in. " " " 28 ft.
- 1 " " " 724 in. " " " 28 ft.
- 1 " " " 726 in. " " " 28 ft.
- 1 " " " 728 in. " " " 28 ft.
- 1 " " " 730 in. " " " 28 ft.
- 1 " " " 732 in. " " " 28 ft.
- 1 " " " 734 in. " " " 28 ft.
- 1 " " " 736 in. " " " 28 ft.
- 1 " " " 738 in. " " " 28 ft.
- 1 " " " 740 in. " " " 28 ft.
- 1 " " " 742 in. " " " 28 ft.
- 1 " " " 744 in. " " " 28 ft.
- 1 " " " 746 in. " " " 28 ft.
- 1 " " " 748 in. " " " 28 ft.
- 1 " " " 750 in. " " " 28 ft.
- 1 " " " 752 in. " " " 28 ft.
- 1 " " " 754 in. " " " 28 ft.
- 1 " " " 756 in. " " " 28 ft.
- 1 " " " 758 in. " " " 28 ft.
- 1 " " " 760 in. " " " 28 ft.
- 1 " " " 76



PICTET ARTIFICIAL ICE COMPANY, Limited,

P. O. BOX 3,083.

142 Greenwich St., NEW YORK.

MACHINES FOR THE PRODUCTION OF ARTIFICIAL ICE AND COLD AIR

by the use of Anhydrous Sulphurous Oxide System of Raoul Pictet. Machines making Ice, Refrigerating Cold Storage Warehouses, Packing Houses, Breweries and Oil Works, especially Oil Pressrooms, will be shown to Parties calling at the office of this Company. Plans and Estimates for any of the above furnished upon application.



FEED MILLS.

Special * Mills

For Bone, Fish-Scrap and other
Fertilizing Material.

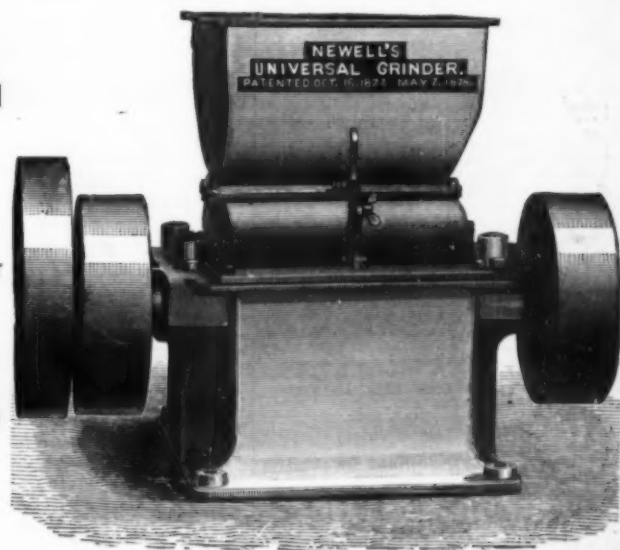
MILLS FOR GENERAL USE.

In place of the Burr Stone.

ROTARY

Hand-Power Rock Drills.

Great Saving in Time and Money.



Also Agents for UNITED STATES and CANADA of ROSE, DUNN & THOMPSON ENGLISH OIL MACHINERY.

Please Send for Cuts and Prices.

NEWELL UNIVERSAL MILL CO.

10 Barclay Street, NEW YORK.

NAYLOR'S PATENT CYLINDER CUP,

Patented Oct. 9, 1883.



**CHEAPEST
AND BEST
Cylinder Lubricator
YET INVENTED.**

Possesses advantages superior to all others. Will feed any clean oil, whether heavy or light.—Can be regulated to feed from 5 to 50 drops per minute. Only one valve to operate and only one connection to make. Cannot clog nor freeze. Every cup tested and guaranteed.

There is no expense in adopting this cup. No pipes nor valves necessary. It is the simplest cup in the market. There is nothing complicated about it.

**NICE LIGHT CYLINDER OIL,
50 Cts. per Gallon.**

AGENT FOR:

Forbes & Curtis' Patent Pipe Cutting and Threading Machine. A boy can cut and thread pipe to 6 inches. Will send one to any responsible person on 10 days trial.
Medart Patent Wrought Rim Pulleys. The strongest and lightest and best pulleys made.—300 kept in stock.
Bemis & Call Combined Screw Wrench and Pipe Wrench—a useful tool.
Lehigh Emery Wheel Company.
Heston and Combination Packing for Engine Glands, &c.
Cleveland Rubber Company.
Chapman Steam Trap.
Todd's New Baxter Portable Engine and Boiler.
Welch & Lawson Gas Engines.
Codd's Cheap Packing.

FOR SALE CHEAP:

Three No. 1 Delamater Steam Pumps—new. One Corn Mill—capacity 6 to 12 bushels an hour. Two Holt's Portable Forges. One hundred Brass Tubes, 1½ inches diameter by 27½ inches long. Three hundred Wrought Rim Pulleys; Holland's Engine and Shafting Cups for Gases. Holland's Grease—Olive Compound. Also Pipe, Tubes, Fittings, Valves and all kinds of Brass Work. Babbitt Metal, Bolts, Lag Screws, Washers and Nuts, Gum and Leather Belting, Sheet Gum and Packings, Set Screws, Wrenches, Emery Wheels, Equit Cams, Injectors, Ejectors and Inspirators, Gate Valves, Stocks and Dies, Pipe Cutters, Sledges, Handles, &c. Shovels, Screws, Pulleys, Shaftings, Hangers, &c., &c.

Wm. C. CODD,
306 and 308 Aliceanna St., BALTIMORE, MD.

BENJAMIN THORNTON. JOHN CAHILL.

People's Machine and Boiler Works.

JAS. CLARK & CO.

BUILDERS OF

Steam Engines, Boilers,

MACHINERY AND IRON HULLS,

Heavy and Light Forging a Specialty.

SOUTH SIDE OF THE BASIN, NEAR CITY YARD.

Convenient to Marine Railways. BALTIMORE.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for 1.50.

FORBES LITHO. MFG. CO.

181 Devonshire St., Boston,

LITHOGRAPHERS & PRINTERS

BY EVERY KNOWN PROCESS.

DRY GOODS

TICKETS

Bands, Labels, &c.

FINE COLOR WORK A SPECIALTY.

Sole Agents for United States and Canada

— FOR —

MAX CREMNITZ,

PARIS, FRANCE,

MANUFACTURER OF

METAL SHOW CARDS.

The Brilliance of Color and Beauty of Finish of these Signs has never been equalled by any other manufacturer.

Galvanized Iron

CORNICE.

Architectural Sheet Metal Work.

Galvanized Iron Gutters made in lengths of 8 feet without a joint.
Corrugated Iron Sheds and Buildings.

GEDDES' PATENT METALLIC SKYLIGHT,
OR A SYSTEM OF GLAZING WITHOUT PUTTY.

VENTILATION.—Ventilating Apparatus a Specialty. Correspondence Solicited.

JAS. W. GEDDES & CO.

67 and 69 North St., BALTIMORE.

OILS

Established 1858.

JAS. B. MACNEAL & CO.

Manufacturers, Jobbers and

Dealers in

Burning, Machinery, Tan-

ners and R. R. Oils,

34 S. CALVERT ST., BALTIMORE.

Special quotations on application.

—Established 1793.—



H. BALDERSTON & SON,

MANUFACTURERS OF

WIRE GRATING FOR WINDOWS,

Doors and Office Railing, Wire Screens for Banks, Churches and Store-Fronts. Woven Wire, Wire Tree-Guards, Sieves, Screens for Coal, Sand, &c.

66 S. Calvert Street, Balt more.

The Favorite

TRANSFER Steamer "MARYLAND" ROUTE.

THROUGH PULLMAN CARS FOR

BOSTON

Without Change.

LEAVE CHARLES-ST. DEPOT at 3 P. M. week days; Sundays at 5.40 P. M., arriving in Boston at 7.55 A. M. next day.
Ask for Tickets via New York & New England Railroad at Pennsylvania Railroad Ticket Offices.

JANNEY & CONGDON,

Manufacturers and Dealers in Every Description of

Goodyear's Rubber Goods,

—Including in Part:—

RUBBER BELTING, HYDRANT HOSE, STEAM, SUCTION, AIR BRAKE, OIL, AND ENGINE HOSE, LINEN AND COTTON HOSE, STEAM PACKING, OAK-TANNED LEATHER BELTING, CUT LACING AND LACE LEATHER SIDES, HEAVY AND LIGHT RUBBER CLOTHING, HORSE CLOTHING, RUBBER DOOR MATS, SPITTOONS, FIRE BUCKETS, GAS AND ACID TUBING, BALLS, TOYS, COMBS, DRUGGISTS' GOODS, STATIONERS' GOODS, AIR GOODS, (BEDS, PILLOWS, CHAIR CUSHIONS, INVALID CUSHIONS, &c.)

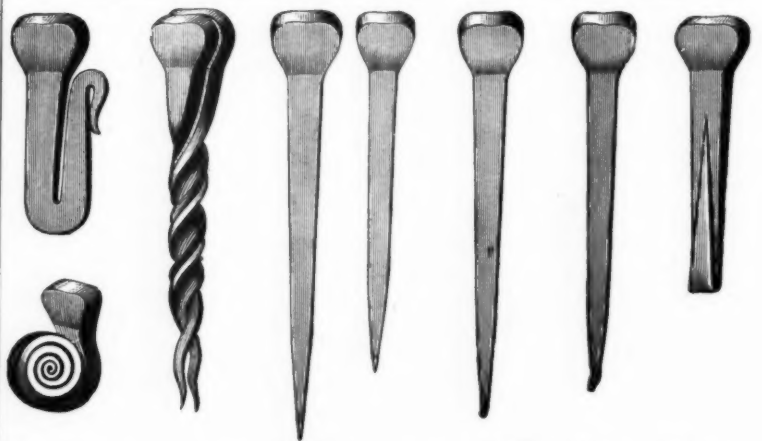
Headquarters for Anything in

Goodyear's Rubber Goods,

At Bottom Prices and in Quantities to Suit.

JANNEY & CONGDON

8 N. Charles St., Baltimore.



Saranac Horse Nail Co.

PLATTSBURGH, N. Y.

A. WILLIAMS, Prest. and Treas.

S. F. VILAS, Vice-Prest.

W. S. GUIBORD, Sec'y.

The cuts illustrating this advertisement are of Nails twisted and bent when cold.

—Agents:—

ELY & WILLIAMS, - - - PHILADELPHIA AND NEW YORK.
S. H. & E. Y. MOORE, - - - - - CHICAGO.
SLIGO IRON STORE CO., - - - - - ST. LOUIS.
S. G. B. COOK & CO., - - - - - BALTIMORE.

—CORRESPONDENCE INVITED.—

Standard Pulley Covering Company.

Guaranteed to give a Large Increase of Power.

Refers by Permission to the following:

Sun Office, Herald Office, A. Hoen & Co., Merrill & Keiser, Brush Electric Light Co., Jos. Thomas & Sons, U. S. Electric Light Co., E. Wise & Sons, Marburg Bros., Smith, Dixon & Co., Union File Works, C. A. Gambrill Mfg. Co.

Gen. Southern Agent for Potter's Belt Hooks, Alligator and Falcon Wrenches

GEO. M. LINDSAY, 95 Sharp St., Baltimore.

THE Greenfield Vertical Engines

From 2½ to 30-Horse Power.

COOKE & CO.

—22 Cortlandt Street, NEW YORK.—

SALES AGENTS AND DEALERS IN
—General—
Machinery AND Supplies.

THESE ENGINES are manufactured with great care, from the best materials, and the workmanship is of the best quality, all the parts being fitted in a thorough and workmanlike manner.

The Steam Joints are scraped and ground to a perfect bearing, thus obviating the annoyance of gum or paper joints.

The Shaft, Piston Rod, Valve Rod, and Cross-head Pin, are made of forged steel. The Cross-head is fitted with composition gibbs, that are adjustable (to take up the wear.) The piston is fitted with spring rings. All the moving parts are evenly balanced, thus assuring steadiness and smooth running.

These engines are finely finished and the parts are made interchangeable. They are all that good work and good material can possibly make them.

The engine is furnished with Boiler on same base when called for.

Agents for Root's Force Blast Blowers, Watson's Forges, Keystone Injectors, Waters' Governors, Empire Chains, &c.

Address COOKE & CO.,

22 Cortlandt St., N. Y.

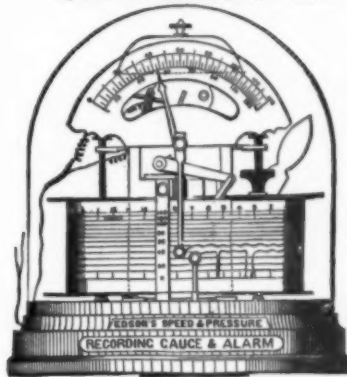
In writing, please mention this paper.



Edson's Combined Speed and Pressure Recording Gauge and Alarm

For Offices of Factories, City Water Works, Steamers, Hospitals, Hotels, etc.

The day has passed for basing steam boiler or engine performance upon assumed bases or conditions. Pressure of steam taken from gauges by ocular observation or piston speed by counting the revolutions by watches are not close enough to give a true mean.



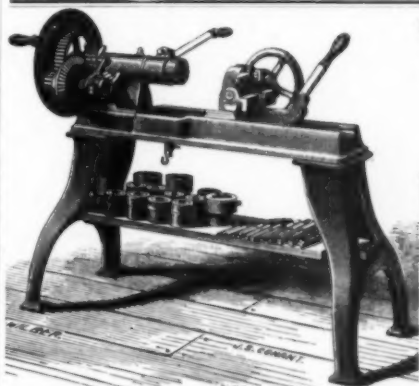
Further information may be obtained by addressing the Edson Recording and Alarm Gauge Company, 11 Liberty Street, New York.

Wiley & Russell Mfg. Co.
—Greenfield, Mass.—

BALTIMORE AGENTS:

MORTON, REED & CO.

Lightning Screw-Cutting and other Labor-Saving Tools.
Celebrated Lightning Screw Plate, Bolt Cutters, Drilling Machines, Punching Presses, Tire Upsetters, Tire Benders, &c., &c.



WM. GROSHANS, Fifth Wheel Manufacturer. This is the only Patent Cold Chisel in the United States being used. (Patent Rights for Sale.) No. 41 Centre Market Space.

ACME * ENGRAVING * STUDIO,

100 Nassau Street, New York City.

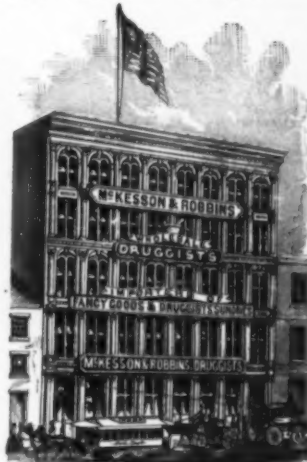
C. W. Crane

Signatures this size to order, 60 cts.



The above is a specimen of Wood-Engraving which we can do to order for \$3, about this size and quantity of work. Larger or smaller at a proportionate rate.

ILLUSTRATIONS FOR CIRCULARS, CATALOGUES, &c.



Views of Buildings this size to order, \$3. Larger or smaller at a proportionate rate.



The above is a specimen of WOOD-ENGRAVING which we can do to order for \$3, about this size and quantity of work. Larger or smaller, at a proportionate rate. All orders by Mail will receive immediate attention.

G. W. CRANE & CO.,

Wood Engravers,

100 NASSAU STREET, NEW YORK CITY.

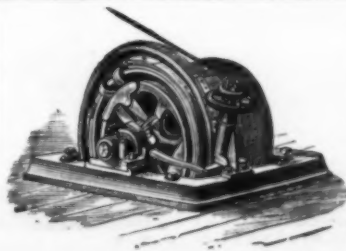
Illustrated Price-List Free.

S. W. RITTER, Millwright,

—BUILDER OF—

Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones, Bolting Cloths, Brushes, Guano Fertilizer Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD.



Charles Webster, Pres. S. M. Burnham, Sec'y.
J. S. Lane, Supl. W. T. Allen, Treas.

WEBSTER, CAMP & LANE MACHINE CO.

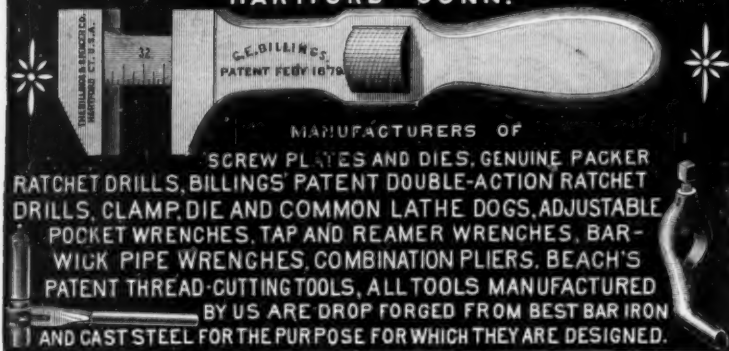
No. 140 Main St., Akron, O.

BAND FRICTION HOIST
For Mines and Blast Furnaces.

The SAFEST, SIMPLEST, STRONGEST and BEST in the Market. Engines, Boilers, Pumps, Skips, and everything pertaining to a first-class plant of Hoisting Machinery. Correspondence solicited.

THE BILLINGS & SPENCER CO.

HARTFORD CONN.



MANUFACTURERS OF
SCREW PLATES AND DIES, GENUINE PACKER
RATCHET DRILLS, BILLINGS' PATENT DOUBLE-ACTION RATCHET
DRILLS, CLAMP, DIE AND COMMON LATHE DOGS, ADJUSTABLE
POCKET WRENCHES, TAP AND REAMER WRENCHES, BAR-
WICK PIPE WRENCHES, COMBINATION PLIERS, BEACH'S
PATENT THREAD-CUTTING TOOLS, ALL TOOLS MANUFACTURED
BY US ARE DROP FORGED FROM BEST BAR IRON
AND CAST STEEL FOR THE PURPOSE FOR WHICH THEY ARE DESIGNED.



Greatest ROCK Breaker On Earth.

CAPACITY { A TON A MINUTE.
Don't Forget it!

Guaranteed to do Double the Work of any other
money refunded. SEND FOR CIRCULARS.

Also Engines, Rollers, Stamp Mill's and Mining Machinery

GATES IRON WORKS,
52 Canal St., Chicago.

STEEL CASTINGS

FROM 1-4 to 15,000 lbs. WEIGHT.

True to pattern, sound and solid, of unequalled strength,
toughness and durability. An invaluable substitute for forg-
ings, or for cast iron requiring three-fold strength.
Gearing of all kinds, Shoes, Dies, Hammer-Heads, Cross-
Heads for Locomotives, etc. 15,000 crank Shafts and 10,000
Gear Wheels of this steel now running prove its superiority
over other Steel Castings.

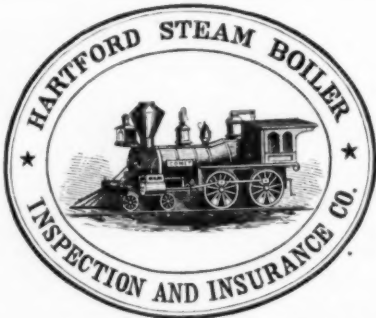
CRANK SHAFTS, CROSS-HEADS AND GEARINGS, special-
ties. STEEL CASTINGS OF EVERY DESCRIPTION.
Circulars and Price-Lists FREE. Address,

CHESTER STEEL CASTINGS CO.

407 Library Street, Philadelphia.

Works, Chester, Pa.

—ISSUES—
POLICIES OF INSURANCE
AFTER



A CAREFUL INSPECTION
OF THE
BOILERS,

Covering all
Loss or
Damage to

Boilers, Buildings and Machinery

ARISING FROM STEAM BOILER EXPLOSIONS.

The Business of the Company Includes All Kinds of Steam Boilers.

Full information concerning the plan of the Company's operations can be obtained at the
COMPANY'S OFFICE, Hartford, Conn., or at any agency.

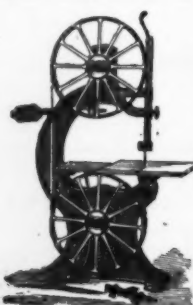
M. ALLEN, Pres. **W. B. FRANKLIN, Vice-Prest.** **J. B. PIERCE, Secy.**

—BOARD OF DIRECTORS—

J. M. ALLEN, President.
LUCIUS J. HENDER, President *Delta Fire Insurance Co.*
FRANK W. CHESLEY, Asst. Treas. *Chesney Bros. Silk Mfg. Co.*
CHARLES M. BEACH, of Beach & Co.
DANIEL PHILLIPS, of Adams Express Co.
GEO. W. BARTHOLOMEW, Pres't *American National Bank.*
RICHARD W. E. JARVIS, Pres't *Colt's Fire Arms Mfg. Co.*
THOMAS O. ENDERS, Secretary *Delta Life Insurance Co.*
LEVERETT BRANARD, of Case, Lockwood & Brainard.

Wm. B. FRANKLIN, Vice-President *Colt's Patent Fire Arms Manufacturing Co.*
GEO. CROMPTON, Crompton Loom Works, Worcester.
WILLIAM ADAMSON, of Bader, Adamson & Co., Phila.
HON. THOMAS TALBOT, Ex-Governor of Massachusetts.
NEWTON CASE, of Case, Lockwood & Brainard, Hartford.
NELSON HOLLISTER, of State Bank, Hartford.
CHARLES T. FARRY, of Baldwin Locomotive Works, Phila.
HON. H. C. ROBINSON, Attorney-at-Law, Hartford.

LAWFORD & MCKIM, Agents for Maryland, 10 S. Holliday St., Baltimore, Md.



PATENT Wood Working Machinery

of the Latest and Most Improved
Designs for

Planing Mills, Furniture Factories, Chair
Factories, Car and Agricultural Works,
Carriage and Buggy Shops and General
Wood Workers.

MANUFACTURED BY
CORDESMAN & EGAN CO.

THOS. P. EGAN, Pres. **EDWIN RUTHVEN, Secy.**
FREDERICK DANNER, Supt.

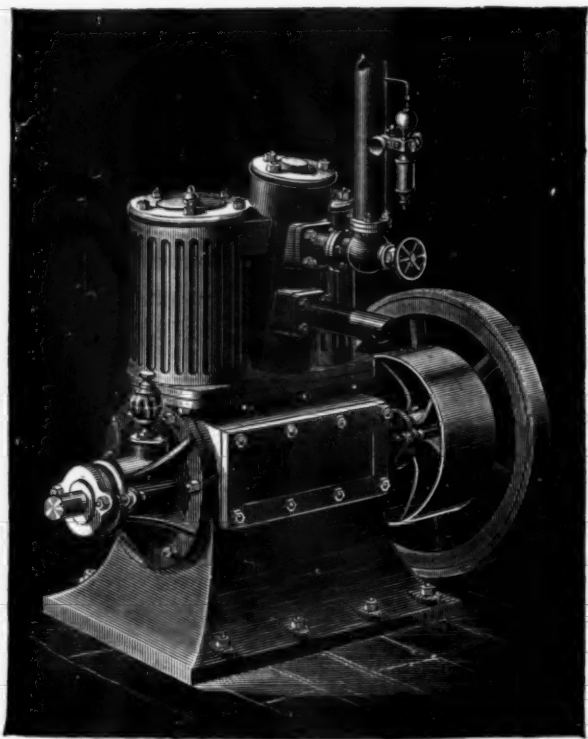
225 to 245 W. Front Street, CINCINNATI, O., U. S. A.



THE Westinghouse Automatic Engine

Over 600 Engines Now in Use. Average Sales, 1,200 H. P. Per Month.

[REAR VIEW, WITH ONE FLY-WHEEL REMOVED.]



The Westinghouse Automatic Engine has no equal in sensitive and close regulation,
low cost of maintenance and general convenience; and in all other essential features
of a First-Class Engine it is guaranteed to have no superior.

Occupies the least space and saves half the cost of foundations. All sizes built
specially to generate and parts interchangeable. Every engine tested to full power before
leaving the shop. Our Engines are largely used in cotton, silk, hosiery and woolen
factories; paper mills; rolling mills; oil mills; saw and planing mills; grist and roller

mills; plaster mills; stamp mills; for cotton ginning; electric lighting; draining and
irrigation; and as a relay to deficient water power; also for fast steam yachts and tugs.
Especially adapted to coupling direct to line shafts, roll trains, beaters, and all kinds of
special machinery. Send for Illustrated Circular and reference list, and state the
horse-power required. Our prices are moderate.

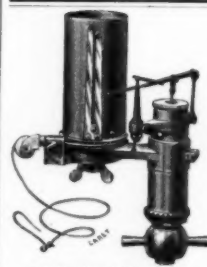
The Westinghouse Machine Co., Pittsburg, Pa.

Address, if more convenient, our following Branch Offices:

94 Liberty St., New York.

14 S. Canal St., Chicago.

401 Elm St., Dallas, Texas.



THOMPSON IMPROVED
INDICATOR.

F. W. Bacon, M. E.,
Geo. A. Barnard, M. E.,
C. H. Brown,
C. W. Copeland, C. E.,
A. M. Davy, M. E.,
Charles E. Emery, C. E.,

THOMPSON Improved Indicator.

ONE THOUSAND NOW IN USE.

Adopted and Used by the Following Engineering Experts:

John W. Hill, M. E.,
William A. Harris,
J. C. Hoadley, C. E.,
T. W. Hugo, M. E.,
Washington Jones, M. E.,
J. F. Klein, M. E.,

E. D. Leavitt, Jr., C. E.,
Henry Morton, C. E.,
Thomas Pray, Jr., C. M. E.,
Frank H. Pond, M. E.,
Prof. R. H. Thurston,
H. W. Bulkley, M. E.

MANUFACTURED SOLELY
BY THE

AMERICAN STEAM GAUGE CO.

Send for Illustrated Price List.

35 Chardon Street, BOSTON, MASS.



ANTI-FRICTION ROLLER DETACHABLE CHAIN BELTING.

Especially adapted for the rapid and economi-
cal handling of CLAY, TILE, LIME, PLASTER, CE-
MENTS, BROKEN STONE, COAL, ORES, SAND, DRY
and WET TAN, SAW DUST, SLABS, PULP, GRAIN,
FLOUR, ICE, &c., &c., &c. For ELEVATORS, CAR-
RIERS, CONVEYERS, &c., &c. Propelling STEAM-
BOATS and for other DRIVING PURPOSES.

MANUFACTURED AND SOLD BY THE

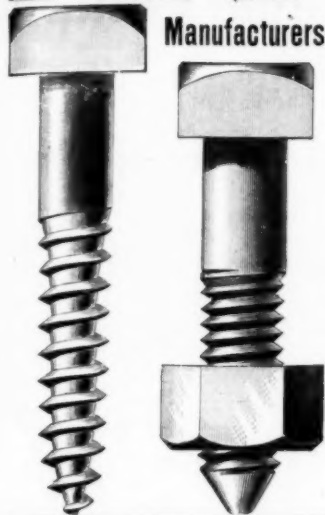
Lechner Manuf'g Co.

COLUMBUS, OHIO.

Send for Illustrated Catalogue.

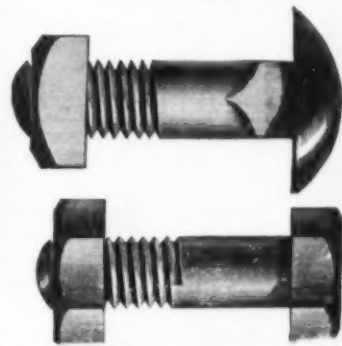
PAWTUCKET MFG. CO.

Manufacturers of Regular and Special Bolts, Gimlet-Pointed Coach Screws, Hanger Bolts, &c. Set and Cap Screws.



FRONT VIEW OF PAWTUCKET MANUFACTURING CO.'S WORKS.

Bolt and Nut Machinery
OF ALL KINDS.



Wm. H. HASKELL, President.

E. S. Mason, Treasurer.

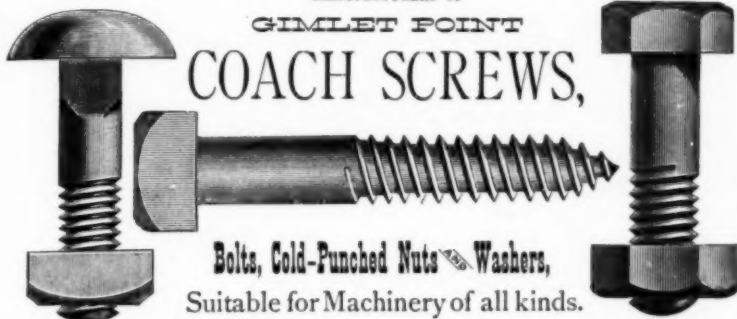
D. A. HUNT, Agent.

W. M. H. HASKELL CO.

MANUFACTURERS OF

GIMLET POINT

COACH SCREWS,



Bolts, Cold-Punched Nuts and Washers,
Suitable for Machinery of all kinds.

Office and Works: 277 Main St., PAWTUCKET, R. I., U. S. A.

HENRY B. NEWHALL CO., Agts.,

105 Chambers St., NEW YORK.

47 Pearl St., BOSTON.

MOOPES & TOWNSEND,

MANUFACTURERS,

PHILADELPHIA, PA.



JARVIS PATENT FURNACE

—FOR SETTING STEAM BOILERS.—



Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, etc. Send for Circulars.

Jarvis Engineering Co.,

A. F. UPTON, Treas. and Genl. Manager,

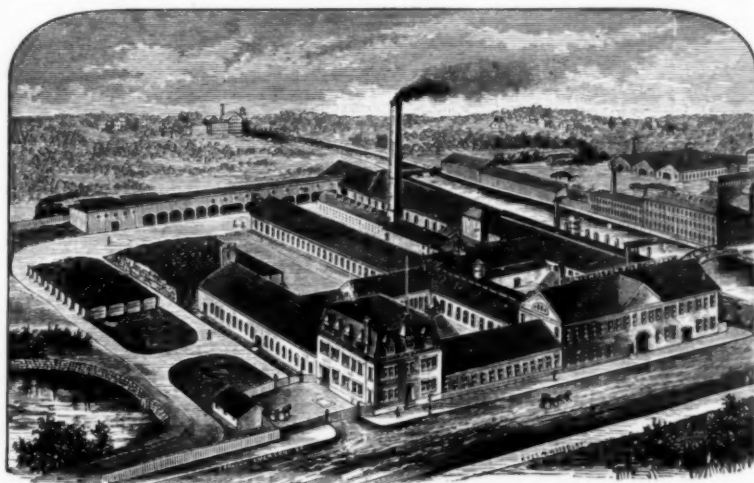
7 Oliver St., Boston, Mass.

JOSHUA C. COE, Agent for Maryland and Virginia,
18 Second Street, Baltimore, Md.

SOUTHERN REFERENCES:

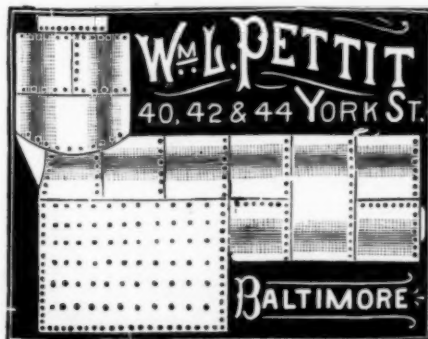
Eagle and Phoenix Mfg. Company, Columbus, Ga.
Lane Cotton Mills, New Orleans, La.
Central Rolling Mills, Louisville, Ky.
Anniston Mfg. Co., Anniston, Ala.
J. P. King Mfg. Co., Augusta, Ga.
Coosaw Mining Co., Charleston, S. C.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Etrick, Matoaca and Battersea Mfg. Co.'s, Petersburg, Va.

Symington Bros. & Co., Baltimore, Md.
Basin Fertilizing Co., Baltimore, Md.
Henry McShane & Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.
Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Nashville Mfg. Co., Nashville, Tenn.
National Mfg. Co., Nashville, Tenn.



NICHOLSON FILE CO.

Works—PROVIDENCE, R. I.—1882.



NOVELTY BOILER WORKS.

MANUFACTURERS OF

HIGH AND LOW PRESSURE

Steam Boilers,

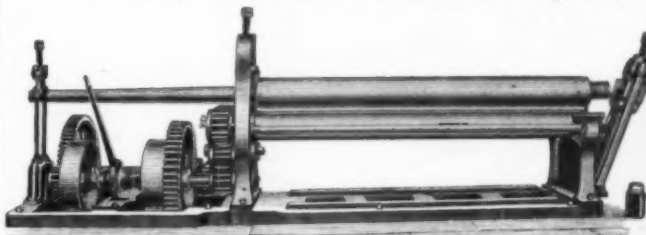
Tank and Sheet Iron Work.

Estimates furnished for New Work and Repairs.

I make a specialty of Scotch Boilers the most economical in fuel, requiring very little repairs.

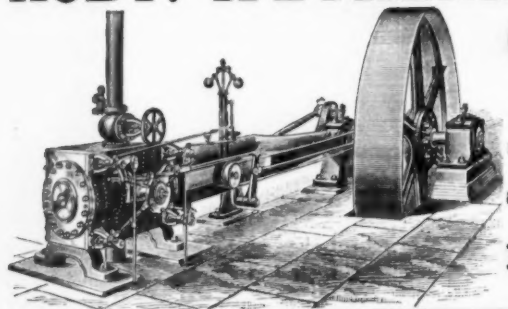
Patent Plate Bending Rolls,

Made by HILLES & JONES, Wilmington, Del.



THIS CUT REPRESENTS
ALL SIZES THAT
ARE DRIVEN BY BELTS.

It is out the work of a moment to balance the top roll and lower the hinge housing to take out the plate when a full circle is bent. The rolls are all made of solid wrought iron, the balance bar being a part or extension of the top roll. There is a cast-iron bed plate under the entire machine. To save any shifting of belts we put in Friction Pulleys, which enable the rolls to be started, stopped or reversed instantly.

ROBT. WETHERILL & CO.**Corliss Engine****BUILDERS,**

Condensing, Non-Condensing
and Compound.
Highest Efficiency and Greatest
Economy, Durability and
Close Regulation.

Boiler Iron Work, Hydraulic
Riveting, Shafting, Pulleys,
Hangers and Gearing.

ROBT. WETHERILL & CO.
CHESTER, PA.

THE Cameron Steam Pump

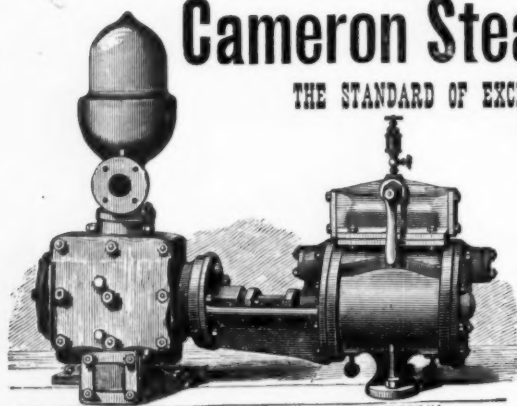
THE STANDARD OF EXCELLENCE.

UPWARD of 30,000 in Use.

SEND FOR ILLUSTRATED CATALOGUE.

The A. S. CAMERON**STEAM PUMP WORKS,**

433 East 23d-St.

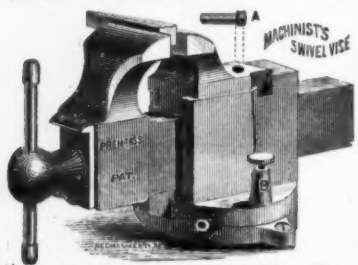
NEW YORK.**Prentiss' Patent Vises.**

Adjustable Jaw.

Stationary or Pat. Swivel Bottoms

CANNOT GET OUT OF ORDER.

Cheapest and Best Vises for Railroad Shops, Machinists, Manufacturers, Mechanics, &c.



"Peerless" (Swivel Jaw) Pipe Grip.
Every Part Interchangeable.
CAN BE USED ON ANY VISE.



For Sale by the Trade.

PRENTISS VISE CO., 23 Dey Street, NEW YORK, Sole Proprietors.**IMPROVED HOISTING ENGINES,**

MANUFACTURED BY THE

LIDGERWOOD MFC. CO.,

Offices and Salesrooms: 96 Liberty St., New York.

MORTON, REED & CO., Agents,

59 and 61 German St., Baltimore.

Specially adapted
for Railroad
and Contractors'
uses, Pile-driving,
Bridge and Dock
Building, Excavating,
etc. Single
or double cylinders,
with single
or double improved
friction drums,
with or without
boilers.

**THE MIDVALE STEEL CO.****TIRES AND AXLES**

OF EVERY DESCRIPTION.

TOOL
AND
MACHINERY STEEL.

CRUCIBLE AND OPEN HEARTH STEEL.

SPRING AND GUN
STEEL.

WORKS AND OFFICE:

Hicetown, Philadelphia, Pa.

WAREHOUSE:

12 North Fifth St., Philadelphia, Pa.

Blake's IMPROVED Steam Pumps

BOILER FEED PUMPS.

Fire Pumps and Mining Pumps.

Water Works Engines & Air Compressors

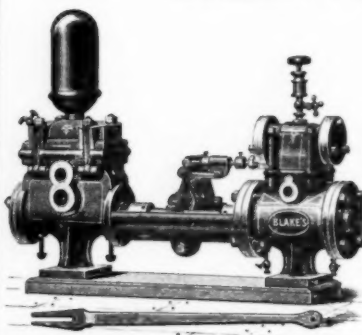
—A SPECIALTY.—

Geo. F. Blake Mfg. Co.

95 and 97 Liberty St.

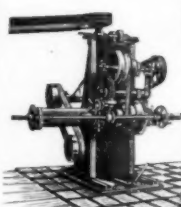
NEW YORK.

44 Washington St., Boston.

**WM. SELLERS & CO.****PHILADELPHIA.****IRON AND STEEL-WORKING MACHINE TOOLS**

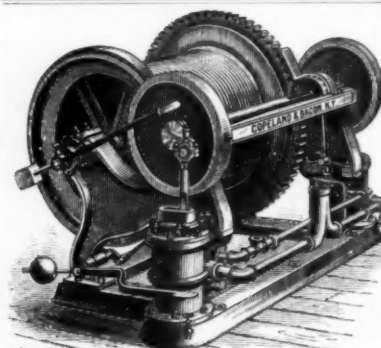
For Railways, Machine Shops and Rolling Mills,

—ALSO—

Shafting, Pulleys, Hangers, Couplings, &c.

Were the first parties to design and introduce the BALL and SOCKET
HANGERS, ADJUSTABLE COUPLINGS, and the system of selling shafts,
Pulleys and Couplings by the piece. Will be pleased at any time to give estimates for work in place,
in mills, or at our works.

Price-lists and other information given when requested.

**BACON** Winding Engines,
Furnace Hoists,
Mine Hoists.

(With or Without Boilers.)

"Mining PLANTS," Concentrating
Works and Dredging Machinery
Furnished Complete.**COPELAND & BACON**

85 Liberty St., New York.

REFERENCES:—Croton Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown
Point, N. Y. Belvidere Iron Co., 52 Broadway, New York. Sea Island Chemical Co., Beaufort, S. C.

THE NATIONAL CHUCK

WARRANTED

THE BEST CHUCK IN THE MARKET.

MANUFACTURED BY

THE National Mfg. Co.

MANUFACTURERS OF

Combination, Universal

and Independent

LATHE CHUCKS,

—NEW HAVEN, CONN.—

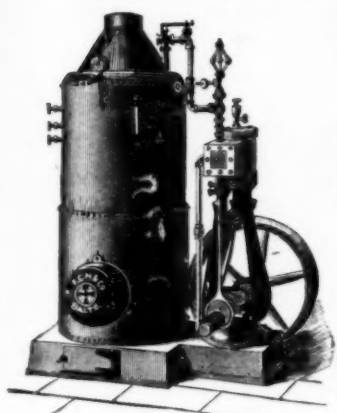
**The Babcock & Wilcox Water Tube Boilers.**

BRANCH OFFICES:

50 Oliver Street,
Boston.32 N. 5th St.,
Philadelphia.91 Fourth Ave.,
Pittsburg.54 Carondelet
St., N. Orleans.64 W. Third St.,
Cincinnati.

BRANCH OFFICES:

707 Market St.,
St. Louis.64 S. Canal St.,
Chicago.565 Mission St.,
San Francisco.San Ignacio,
No. 50, Havana,
Cuba.107 Hope Street,
Glasgow,
Scotland.Manufactured by the **BABCOCK & WILCOX CO., 30 Cortlandt Street, NEW YORK.**



F. C. NICODEMUS & CO. [LIMITED.]

Manufacturers of

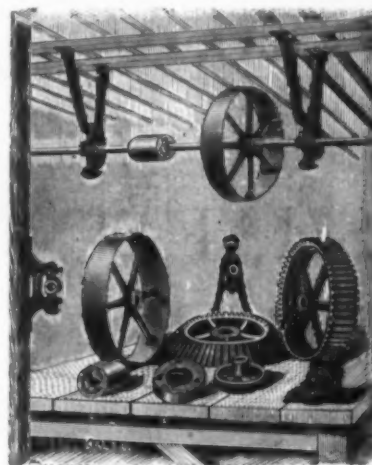
Stationary AND Marine Engines AND Boilers

Plate Iron and Machine Work of Every Description.

F. C. NICODEMUS & CO.

No. 134 Thames Street.

Branch Office, 59 Exchange Place, BALTIMORE, MD.



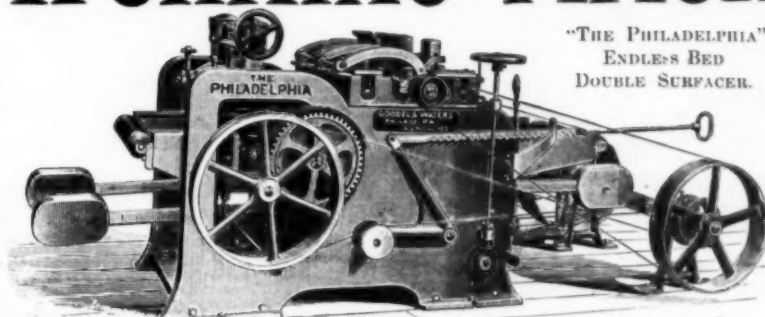
Southern Agents for the Waters Patent Feed Water Heater for Steam Boilers; a saving of 20 to 30 per cent. guaranteed. Agents for "Success" Force and Suction Pump Co.

Transmission Machinery a Specialty.
Shafting, Pulleys, Hangers, &c.

WOOD-WORKING MACHINERY

FOR

Planing Mills,
Railroad
Shops,
Car Builders,



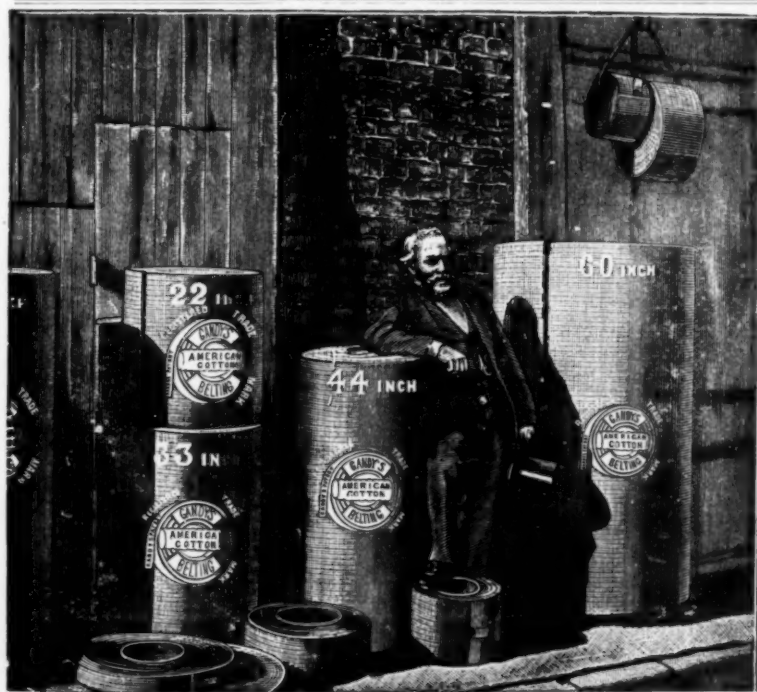
"THE PHILADELPHIA"
ENDLESS BED
DOUBLE SURFACER.

Cabinet,
Carriage,
Sash, Door
and Blind
Makers.

Send for Circulars.

GOODELL & WATERS, Cor. 31st and Chestnut Sts., Philadelphia, Pa.

CUMBERLAND DUGAN & CO.,
No. 26 S. Charles Street, Baltimore,
Southern Agents.



SILVER MEDAL AWARDED AT THE "NATIONAL EXPOSITION OF RAILWAY APPLIANCES," CHICAGO, JUNE, 1883.

GANDY'S PATENT

AWARDED MEDALS AT

Berlin.....1879.
Hamburg.....1878.
Sydney.....1879.

New Zealand.....1882.
Cincinnati.....1879.
New York.....1880.

Machine Belting

MADE PERFECTLY STRAIGHT AND ANY LENGTH WITHOUT JOINTS.

For Main Driving it is the Best.

—Much Cheaper than Leather.

—MANUFACTURED BY—

THE GANDY BELTING CO.

BALTIMORE, MD.

UNION STONE COMPANY,

Patentees and Manufacturers of the

UNION EMERY WHEEL.

Grinders and Polishers'
Supplies.

EMERY.
Union Emery Wheels,
Emery Wheel Machinery,
Emery Hones and
Rub Stones, Emery
Wheel Dressers,
Emery Cloth,
Diamond Tools,
Automatic Self-Grinding Machines,
Ware's Patent
Anti-Bursting Flanges.

QUARTZ.
Wooden Polishing Wheels,
Wood Wheel Machines,
CORUNDUM.
Polishing Belts, Polishing
Belt Machines, Polishing
Lathes,
Polishing Leather, Polishing
Materials of
all kinds.

Pumice-Stone,
Powdered and Lump.
GLUE,
Especially for Wooden
Polishing Wheels
and Belts.

CATALOGUE
ON
Application.

38 and 40 HAWLEY STREET, BOSTON, MASS.

JACKSON & TYLER, Agents, 16 and 18 S. Howard St., Baltimore, Md.

GEO. V. CRESSON,

PHILADELPHIA

SHAFTING WORKS,

18th and Hamilton Streets, Philadelphia, Pa.

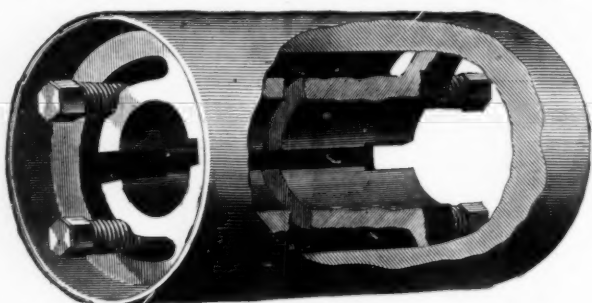
—MANUFACTURER OF—

SHAFTING,

And all the Appurtenances used in the

Transmission of Steam Power.

U. S. CENTENNIAL, 1876,
First Premium.



PARIS EXPOSITION,
1878.

Patent Internal Clamp Coupling for Shafting.

Most easily applied and removed, and has a much stronger grip on Shaft than any other Coupling yet invented.

In use by all First-Class Machinists and Manufacturers. Many thousands in practical use.

HECLA POWDER.



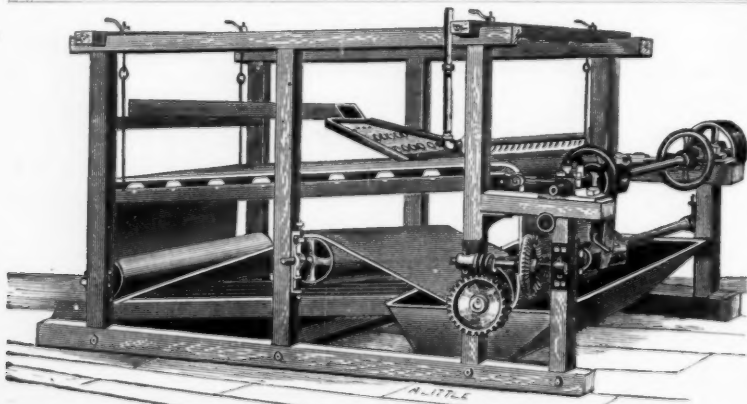
Safest, Strongest and Best

HIGH EXPLOSIVE

IN THE MARKET.

All grades and sizes supplied at short notice at closest prices. CAPS, FUSE and ELECTRIC GOODS at hardpan prices.

THE HECLA POWDER CO., 57 Broadway, N. Y.

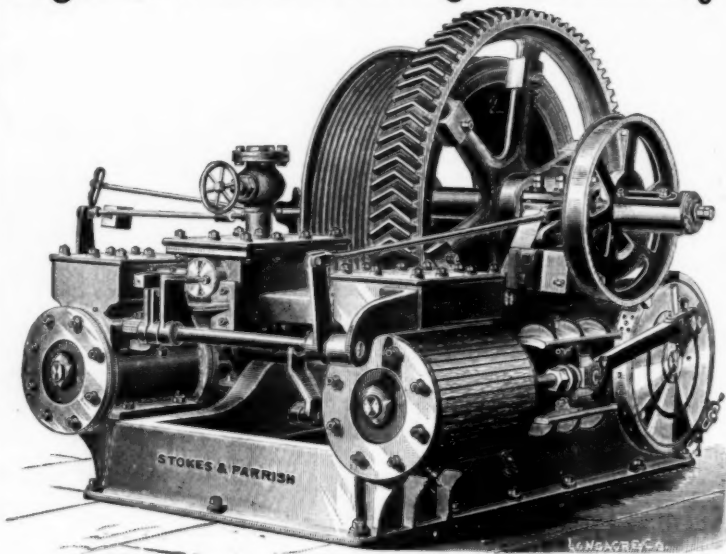


Concentration Works, Gold and Silver Mills of any size; Plans and Specification furnished on Application.

STOKES & PARRISH,

PHILADELPHIA.

High-Grade Hoisting Machinery.



Blast Furnace Hoist,

With Vertical or Horizontal Cylinder Engines. Hoisting Machinery for Mines, Blast Furnaces, Inclined Planes, Portable Hoisting Machines.

Hydraulic and Steam Power Passenger and Freight Elevators.

Safety—Speed—Smooth Action.

All Kinds of HOISTING MACHINERY a Specialty.

Works and Office, 30th and Chestnut Sts., Philadelphia.

New York Office, 95 and 97 Liberty St., New York.

Ludlow Valve Manfg. Co.

Office and Works:

938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—



VALVES

Double and Single Gate, 1/2 inch to 48 inch, outside and inside screws, indicators, etc., for Gas, Water, Steam, Oil. Send for Circular.



Also, Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

The Embury Ore Concentrator

[PATENTED MARCH 22D, 1881.]

Proven at the mines to be the best Concentrator in the market. Guaranteed not to infringe any patent. Capable of treating ores, from No. 20 mesh to slimes (inclusive), with a better concentration and far cleaner waste than any other concentrator.

STEPHEN P. M. TASKER,

Sole Manufacturer,

Care of Morris Tasker & Co., [Limited,]

5th and Tasker Sts., PHILADELPHIA, PA., U. S.